

**FINAL**

**ENVIRONMENTAL ASSESSMENT  
FOR ENHANCED USE LEASE OF U.S. AIR FORCE LANDS  
TO THE CITY OF NORTH LAS VEGAS  
FOR CONSTRUCTION AND OPERATION  
OF A WATER RECLAMATION FACILITY  
NELLIS AIR FORCE BASE, NEVADA**



**Prepared for:  
United States Air Force**

**by  
City of North Las Vegas**

**2008**

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## **FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

### **1. Name of Action.**

ENHANCED USE LEASE OF U.S. AIR FORCE LANDS TO THE CITY OF NORTH LAS VEGAS FOR CONSTRUCTION AND OPERATION OF A WATER RECLAMATION FACILITY, NELLIS AIR FORCE BASE, NEVADA

### **2. Description of Proposed Action and Alternative Actions**

#### **Proposed Action:**

The U.S. Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with the City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The Nellis AFB property is currently developed as part of the Nellis AFB Sunrise Golf Course. The CNLV would construct a water reclamation facility (WRF) on the property in phases as population increases and other conditions warrant. The initial phase of the WRF would treat approximately 20 million gallons of wastewater per day (mgd); ultimate capacity would be 50 mgd.

The WRF would include closed treatment basins, administration and maintenance buildings, warehouse buildings, pump stations and wastewater treatment process structures, and parking space for employees and moveable equipment. All of the treatment basins would be primarily below ground level, with approximately 6 feet visible above ground. The buildings would be painted to match the surrounding desert landscape, and the tallest structure would be 55 feet tall.

The WRF would use advanced membrane technology, ultra-violet (UV) disinfection, completely filtered air emissions for odor control, and solids reduction technology. A wall and fence would be constructed to surround the WRF, and access would be secured 24 hours per day, seven days per week.

The CNLV would supply Nellis AFB with reclaimed water from the WRF sufficient to irrigate the golf course, as well as for other non-potable uses on the installation. Excess reclaimed water would be discharged to Sloan Channel, located approximately 500 feet east of the property. The EUL to the CNLV for the WRF would also provide the USAF with funds to repair aging infrastructure.

#### **Alternative Actions:**

Alternatives to the Proposed Action were previously addressed in an Environmental Assessment (EA) developed for the Bureau of Reclamation (RECLAMATION) by the CNLV in 2007. One of the previously assessed alternative actions, denoted as the Frehner Site Alternative, is a viable alternative to the Proposed Action for RECLAMATION and the CNLV.

For the Frehner Site Alternative, the CNLV would construct a WRF on a 21-acre CNLV-owned site located on Frehner and Losee Roads. The components of the WRF would be similar to those described for the Proposed Action, but the Frehner Site WRF would be configured differently to fit the smaller area. The pipeline and lift station infrastructure required for operation of a WRF on the Frehner site would be substantial in comparison to the Proposed Action.

The primary disadvantage to the Alternative Action for the public is that the significantly larger pipeline and lift station infrastructure that would be constructed would result in substantially higher project costs. Higher project costs would result in higher utility costs and higher taxes for CNLV residents and customers in Clark County and surrounding communities. In addition, the Frehner Site is half of the size of the Proposed Action site, which would limit future WRF capacity expansion.

The primary disadvantage to the Alternative Action for the USAF would be that an EUL with the CNLV for construction and operation of a WRF would not be accomplished and, therefore, the USAF would not receive funding from the CNLV for infrastructure repairs. Also, Nellis AFB would not receive reclaimed water as described in the Proposed Action.

**No Action Alternative:**

Under the USAF No Action Alternative, no EUL to the CNLV would be executed. The CNLV would not construct a WRF on Nellis AFB. The CNLV would not provide Nellis AFB with reclaimed water from a WRF on Nellis AFB for golf course irrigation and other non-potable purposes. Nellis AFB would continue to draw from the Las Vegas Valley aquifer system to irrigate the Sunrise Golf Course.

### **3. Summary of Environmental Resources and Impacts**

**Land Use:** Change from military recreational use to civil public use, impacts would be insignificant. Beneficial effects for Nellis AFB due to reduced Bird Aircraft Strike Hazard (BASH) issues.

**Geology and Soils:** Minor impacts on soils during construction, no impacts on geology resources.

**Aesthetics:** Change from open recreation space to civil industrial site, insignificant impacts due to mitigation with landscaping and reduced visual intrusion, and industrial nature of adjacent properties.

**Air Quality:** Minor temporary impacts during construction, no impacts during WRF operation.

**Noise:** Insignificant impacts during construction. Site is located within the 70 DNL noise contour for Nellis AFB aircraft effects.

**Water Resources:** Long-term cumulative beneficial effects for Nellis AFB and surrounding communities due to reduced groundwater withdrawal.

**Biological Resources:** No significant impacts due to disturbed nature of the current site. No listed species impacts, since none are present on the site.

**Socioeconomics:** Long-term beneficial effects for surrounding communities due to reduced wastewater treatment costs.

**Environmental Justice:** No disproportionate health or environmental impacts on the community of Sunrise Manor. Benefits of lower wastewater treatment costs would be for all members of the community.

**Protection of Children:** Insignificant short-term impacts during construction would be mitigated by safety controls on the construction site.

**Cultural Resources:** No impacts, since no cultural resource sites are present.

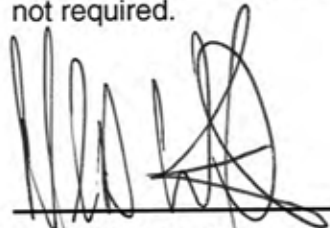
**Hazardous and Toxic Substances:** Insignificant impacts during construction would be mitigated by use of Best Management Practices (BMPs) to control possible equipment fluids spills.

**Safety:** No impacts; all OSHA requirements would be followed. Safety and emergency response would shift from Nellis AFB to Clark County.

**Cumulative Impacts:** No significant adverse cumulative impacts would result from the Proposed Action; and significant beneficial cumulative effects would result for Nellis AFB and the CNLV and surrounding communities due to savings of millions of dollars on wastewater treatment costs and the significant reduction of groundwater withdrawal by Nellis AFB and others for non-potable uses.

#### 4.0 Conclusions

Based on the analysis and conclusions presented in the EA, conducted in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations, and Air Force Environmental Impact Analysis Process, as promulgated in Title 32 of the Code of Federal Regulations Part 989, and after careful review of the potential impacts, I conclude that implementation of the Proposed Action or the Alternative Actions would result in no significant impacts on the quality of the human or natural environments. Therefore, a Finding of No Significant Impact (FONSI) is warranted, and an Environmental Impact Statement (EIS) is not required.



MARK D. WRIGHT  
Colonel, USAF  
Deputy Director of Installations and Mission Support



Date

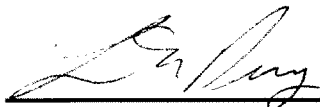


**FINDING OF NO SIGNIFICANT IMPACT  
(FONSI)  
(LC-08-019-FONSI)**

**Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas for  
Construction and Operation of a Water Reclamation Facility  
Nellis Air Force Base, Clark County, Nevada**

Based on a thorough review of the analysis of the environmental impacts presented in the attached Environmental Assessment, the Bureau of Reclamation (Reclamation), Lower Colorado Regional Office, concludes that implementation of the proposed action does not constitute a major federal action significantly affecting the quality of the human and biological environment within the project area. Therefore, an Environmental Impact Statement is not required and Reclamation is issuing this FONSI. The Enhanced Use Lease by the United States Air Force with the City of North Las Vegas (CNLV) would allow the construction of a 50 million gallon per day water reclamation facility (WRF). Reclamation's action is to provide partial funding to the CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266). Reclaimed water from the WRF would be used by Nellis Air Force Base for golf course irrigation and other suitable non-potable uses. Excess reclaimed water would be discharged to Sloan Channel, located approximately 500 feet east of the property.


The FONSI has, therefore, been prepared and is submitted to document environmental review and evaluation of the proposed action in compliance with the National Environmental Policy Act of 1969, as amended.

Prepared:   
Natural Resources Specialist

Date 5/9/2008

Recommended:  Acting  
Environmental Compliance Group Manager

Date 5/9/2008

Approved:   
for William J. Liebhauser, Director  
Resources Management Office

Date 5-9-08





**COVER SHEET  
ENVIRONMENTAL ASSESSMENT  
ENHANCED USE LEASE OF U.S. AIR FORCE LANDS  
TO THE CITY OF NORTH LAS VEGAS  
FOR CONSTRUCTION AND OPERATION OF A WATER RECLAMATION FACILITY  
NELLIS AIR FORCE BASE, NEVADA**

- a. Responsible Agency: U.S. Air Force
- b. Proposed Action: Enhanced use lease (EUL) of Nellis Air Force Base (AFB) property, in accordance with Executive Order (EO) 13327, *Federal Real Property Asset Management*, dated February 4, 2004, for phased construction and operation of a 50 million gallon per day (mgd) wastewater reclamation facility (WRF) on 40 acres of Nellis AFB property. The WRF would serve the City of North Las Vegas (CNLV) and surrounding areas, as well as Nellis AFB. Reclaimed water would be used by Nellis AFB for irrigation and other beneficial uses, and excess water would be discharged to Sloan Channel.
- c. Written comments and inquiries regarding this document should be directed to:

99 ABW/PA  
4430 Grissom Ave, Suite 107  
Nellis AFB, NV 89191  
ATTN: Mr. Mike Estrada

In addition, the document can be viewed and downloaded from the World Wide Web at:  
[www.nellis.af.mil/library/environment.asp](http://www.nellis.af.mil/library/environment.asp)

A hard copy is available for review at:  
Las Vegas Library, Reference Department  
833 Las Vegas Blvd. North  
Las Vegas, NV 89101

- d. Report Designation: Environmental Assessment (EA)
- e. Abstract: This EA evaluates the potential environmental impacts of the EUL of 40 acres of Nellis AFB property to the CNLV for the construction and operation of a WRF to serve the CNLV and Nellis AFB. A 50 mgd WRF would be constructed in phases on Nellis AFB property that is currently being used as part of the Nellis AFB golf course. The WRF would generate reclaimed water, a portion of which would be used by Nellis AFB for golf course irrigation and for other beneficial uses. Other industrial and recreational users would also use reclaimed water from the WRF for non-potable uses. Excess reclaimed water would be discharged to Sloan Channel, which runs through Nellis AFB approximately 500 feet east of the project site.

This EA has been prepared in accordance with the *National Environmental Policy Act* (NEPA) and 32 CFR 989, the *Air Force Environmental Impact Analysis Process* (EIAP) to analyze the potential environmental consequences of the Proposed Action and the No-Action Alternative. Under the No Action Alternative, no EUL would be initiated, the WRF would be constructed by the CNLV at the Frehner site, located 3.6 miles northwest of the Nellis AFB site, and wastewater generated by the CNLV and Nellis AFB would be pumped to the WRF at greater cost than the Proposed Action. Also, construction of the WRF at the Frehner site would be more complex, and would cost the CNLV significantly

more than the Proposed Action. Future wastewater treatment costs for Nellis AFB under the Frehner Site Alternative would also cost more than the Proposed Action.

The environmental resources potentially affected by the Proposed Action are land use, geology and soils, aesthetics, air quality, noise, water resources, vegetation, wildlife, and socioeconomic issues. Based on an analysis of affected resources and mitigation measures to be employed, no significant impacts on any of the affected resources would occur as a result of the Proposed Action. The long-term economic benefits for Nellis AFB and the CNLV resulting from the Proposed Action greatly outweigh any insignificant impacts on affected resources.

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## TABLE OF CONTENTS

---

<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>VII</b>
<b>1.0 PURPOSE OF AND NEED FOR ACTION.....</b>	<b>1-1</b>
1.1 PURPOSE AND NEED FOR PROPOSED ACTION .....	1-1
1.2 LOCATION OF THE PROPOSED ACTION .....	1-4
1.3 SCOPE OF ENVIRONMENTAL REVIEW .....	1-6
1.4 FEDERAL, STATE, AND LOCAL PERMITS, LICENSES, AND FEES .....	1-6
1.5 RELATED ENVIRONMENTAL DOCUMENTS .....	1-7
<b>2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES .....</b>	<b>2-1</b>
2.1 DESCRIPTION OF THE PROPOSED ACTION .....	2-1
2.2 ALTERNATIVES TO THE PROPOSED ACTION .....	2-3
2.2.1 Introduction .....	2-3
2.2.2 USAF: No Action Alternative .....	2-3
2.2.3 Bureau of Reclamation: Frehner Site .....	2-3
2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION .....	2-5
2.4 NO ACTION ALTERNATIVE .....	2-5
2.5 SUMMARY OF ENVIRONMENTAL IMPACTS .....	2-5
<b>3.0 AFFECTED ENVIRONMENT .....</b>	<b>3-1</b>
3.1 INTRODUCTION .....	3-1
3.2 LAND USE .....	3-2
3.3 GEOLOGY AND SOILS .....	3-2
3.4 AESTHETICS .....	3-3
3.5 AIR QUALITY .....	3-3
3.5.1 Conformity Rule Requirements .....	3-4
3.6 NOISE .....	3-5
3.7 WATER RESOURCES .....	3-6
3.7.1 Surface Water .....	3-8
3.7.2 Hydrogeology/Groundwater .....	3-8
3.8 BIOLOGICAL RESOURCES .....	3-9
3.8.1 Vegetation .....	3-9
3.8.2 Wildlife .....	3-9
3.8.3 Sensitive Species .....	3-10
3.9 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN .....	3-11
3.9.1 Socioeconomics .....	3-11
3.9.2 Environmental Justice .....	3-12
3.9.3 Protection of Children .....	3-13
3.10 CULTURAL RESOURCES .....	3-14
3.11 HAZARDOUS AND TOXIC SUBSTANCES .....	3-15
<b>4.0 ENVIRONMENTAL CONSEQUENCES .....</b>	<b>4-1</b>
4.1 INTRODUCTION .....	4-1
4.2 LAND USE .....	4-1
4.2.1 Proposed Action Site .....	4-1
4.2.2 USAF No Action Alternative .....	4-2
4.3 GEOLOGY AND SOILS .....	4-2
4.3.1 Proposed Action Site .....	4-2
4.3.2 USAF No Action Alternative .....	4-3

4.4	AESTHETICS .....	4-3
4.4.1	Proposed Action Site .....	4-3
4.4.2	USAF No Action Alternative.....	4-4
4.5	AIR QUALITY .....	4-4
4.5.1	Proposed Action Site .....	4-4
4.5.2	USAF No Action Alternative.....	4-6
4.6	NOISE .....	4-6
4.6.1	Proposed Action Site .....	4-6
4.6.2	USAF No Action Alternative.....	4-7
4.7	WATER RESOURCES.....	4-8
4.7.1	Proposed Action Site .....	4-8
	4.7.1.1 Surface Water.....	4-8
	4.7.1.2 Groundwater.....	4-9
4.7.2	USAF No Action Alternative.....	4-9
4.8	BIOLOGICAL RESOURCES .....	4-10
4.8.1	Vegetation .....	4-10
	4.8.1.1 Proposed Action Site .....	4-10
	4.8.1.2 USAF No Action Alternative.....	4-10
4.8.2	Wildlife .....	4-10
	4.8.2.1 Proposed Action Site .....	4-10
	4.8.2.2 USAF No Action Alternative.....	4-10
4.8.3	Sensitive Species .....	4-10
	4.8.3.1 Proposed Action Site .....	4-10
	4.8.3.2 USAF No Action Alternative.....	4-11
4.9	SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN .....	4-11
4.9.1	Proposed Action Site .....	4-11
	4.9.1.1 Socioeconomics.....	4-11
	4.9.1.2 Environmental Justice.....	4-12
	4.9.1.3 Protection of Children .....	4-12
4.9.2	USAF No Action Alternative.....	4-13
4.10	CULTURAL RESOURCES.....	4-13
4.10.1	Proposed Action Site .....	4-13
4.10.2	USAF No Action Alternative.....	4-13
4.11	HAZARDOUS AND TOXIC SUBSTANCES .....	4-13
4.11.1	Proposed Action Site .....	4-13
4.11.2	USAF No Action Alternative.....	4-14
4.12	SAFETY .....	4-14
4.12.1	Proposed Action Site .....	4-14
4.12.2	USAF No Action Alternative.....	4-14
4.13	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES..	4-14
4.14	CUMULATIVE IMPACTS .....	4-15
<b>5.0</b>	<b>REFERENCES.....</b>	<b>5-1</b>
<b>6.0</b>	<b>LIST OF PREPARERS .....</b>	<b>6-1</b>

## **List of Figures**

Figure 1-1. Vicinity Map .....	1-3
Figure 1-2. Proposed Action Location map.....	1-5
Figure 2-1. Proposed Action site Layout.....	2-2
Figure 2-2. Frehner Site Location .....	2-4
Figure 3-1. DNL Noise Contours for Nellis AFB Operating Aircraft .....	3-7

## **List of Tables**

Table 2-1. Summary of Environmental Impacts.....	2-6
Table 3-1. National Ambient Air Quality Standards .....	3-4
Table 4-1. Total Air Emissions (tons/year) from Construction Activities .....	4-5
Table 4-2. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances .....	4-6

## **List of Photographs**

Photograph 3-1. The visual resources of the Nellis AFB golf course are characterized by open space .....	3-3
Photograph 3.2. Industrial activity adjacent to the Proposed Action site .....	3-6
Photograph 3-3. Golf course pond on the Proposed Action site .....	3-8
Photograph 3-4. Burrowing owls in the bank of Sloan Channel.....	3-11
Photograph 3-5. Public park across Carey Avenue from the Proposed Action site .....	3-14

## **List of Appendices**

Appendix A. 2007 Bureau of Reclamation EA and FONSI	
Appendix B. Air Quality Calculations	
Appendix C. Federal Listed Species	
Appendix D. Distribution List	
Appendix E. Public Notices, Comments and Responses	

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## ACRONYMS AND ABBREVIATIONS

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ACHP	Advisory Council on Historic Preservation
AFB	Air Force Base
AFOSH	Air Force Occupational Safety and Health
APE	area of potential effect
ASTM	American Society for Testing and Materials
BAQ	Bureau of Air Quality
bgs	below ground surface
BLM	Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CAAP	Clean Air Action Plan
CDP	Census Designated Place
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CNLV	City of North Las Vegas
CWA	Clean Water Act
DA	direct action
dB	decibel
dBA	decibel, A-weighted
DCNR	Department of Conservation and Natural Resources
DNL	Day/Night Average Sound Level
DoD	Department of Defense
DOI	Department of the Interior
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ESA	Endangered Species Act
EUL	Enhanced Use Lease
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
HUD	U.S. Department of Housing and Urban Development
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
mg/m <sup>3</sup>	milligrams per cubic meter
mgd	million gallons per day
MSL	mean sea level
MOU	memorandum of understanding
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NDCNR	Nevada Department of Conservation and Natural Resources
NDEP	Nevada Department of Environmental Protection
NEPA	National Environmental Policy Act
NFRAP	No Further Restoration Action Planned
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System



NPS	National Park Service
NRHP	National Register of Historic Places
NRS	Nevada Revised Statutes
NO <sub>2</sub>	nitrogen dioxide
O <sub>3</sub>	ozone
OSHA	Office of Safety and Health Administration
PCI	Per Capita Income
PL	Public Law
PM-2.5	particulate matter equal or less than 2.5 microns in diameter
PM-10	particulate matter equal or less than 10 microns in diameter
ppm	parts per million
RECLAMATION	Bureau of Reclamation
ROI	Region of Influence
SEL	Sound Exposure Level
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SPCCP	Spill Prevention Control and Countermeasures Plan
SWPPP	Storm Water Pollution Prevention Plan
THPO	Tribal Historic Preservation Officer
µg/m <sup>3</sup>	micrograms per cubic meter
UNLV	University of Nevada Las Vegas
USC	United States Code
USCB	U.S. Census Bureau
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USFWS	U.S. Fish and Wildlife Service
UV	ultraviolet
WRF	Water Reclamation Facility

***SECTION 1.0***  
***PURPOSE OF AND NEED FOR ACTION***





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## **1.0 PURPOSE OF AND NEED FOR ACTION**

---

This Environmental Assessment (EA) has been prepared to comply with the *National Environmental Policy Act* (NEPA) of 1969 (Public Law [PL] 91-190; 42 United States Code [USC] 4321-4347), as amended. Preparation of this EA followed regulations and instructions established in 32 Code of Federal Regulations [CFR] Part 989, *Environmental Impact Analysis Process (EIAP)* for the United States (U.S.) Air Force (USAF), and 40 CFR 1500 – 1508, *Council on Environmental Quality* (CEQ) Regulations for the Implementation of NEPA. This EA evaluates the potential environmental impacts of activities associated with the proposed enhanced use lease (EUL) of Nellis Air Force Base (AFB) property, as directed by Executive Order (EO) 13327, *Federal Real Property Asset Management*, dated February 4, 2004, for construction and operation of a water reclamation facility (WRF) by the City of North Las Vegas (CNLV).

### **1.1 PURPOSE AND NEED FOR PROPOSED ACTION**

The purpose of the Proposed Action for the CNLV is to provide wastewater treatment and water reclamation for the increasing population of the CNLV and surrounding areas and for Nellis AFB. The need for water reclamation in the Las Vegas Valley's expanding desert communities is to augment a very scarce resource, water, which is necessary for the physical and economic survival of the region. The purpose of the Proposed Action for Nellis AFB is to meet directives to seek efficient and economic opportunities for cooperative real property transactions that would result in benefits for the installation and the general public, as well as water conservation directives. Nellis AFB needs to repair aging infrastructure and conserve resources.

Currently, 18 million gallons of wastewater from the CNLV and 1.3 million gallons from Nellis AFB are transported to City of Las Vegas and Clark County Water Reclamation District treatment facilities each day for treatment and disposal. The current infrastructure in the northeast part of the CNLV and Clark County required for transporting the wastewater lacks sufficient capacity to meet the needs of the growing population of the CNLV and Clark County. Extensive growth in the CNLV and surrounding areas has required continual upgrades to existing facilities to accommodate increased inflow and improve the quality of the effluent generated by those facilities.

Results of a 2005 wastewater treatment requirements study completed for the CNLV indicated that wastewater generated by projected population growth would increase to 50 million gallons per day (mgd). An additional concern for the CNLV is the capacity and availability of water supply to meet continuing population growth. Reclamation and reuse of water has become a necessity in the Las Vegas Valley. Construction of a new WRF would be the most cost-effective option to meet current and projected demands, ultimately saving the CNLV and its utility customers more than \$249 million by the year 2030 (CNLV 2005).

Subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266), the Bureau of Reclamation (RECLAMATION) would provide partial funding to the CNLV for construction of a WRF that would employ efficient reclamation technologies. The CNLV evaluated several sites for a new WRF, and determined that the most economical and strategically feasible location for a new facility would be adjacent to Sloan Channel on Nellis AFB. Construction of a WRF on the Nellis AFB site would eliminate the need for discharge pipelines and the lining of the discharge channel, as Sloan Channel is an existing lined concrete discharge channel. This location would also reduce and eliminate the need for major lift stations and force mains, since most flow would be by gravity. It would also relieve major costs to Clark County that would be incurred from expansion of a new system to existing collection facilities. These advantages would substantially reduce project costs.

At the initial CNLV project planning stage, however, the Nellis AFB acreage was not available. The CNLV proposed to construct a WRF at a less desirable alternative location (Figure 1-1) at the intersection of Frehner and Lossee Roads (Frehner site). An EA was prepared by the CNLV for RECLAMATION, which evaluated potential impacts resulting from construction and operation of a WRF at the Frehner site. The assessment resulted in a Finding of No Significant Impact (FONSI), signed by the RECLAMATION Resources Management Office Director on September 13, 2007 (RECLAMATION 2007). The RECLAMATION EA and FONSI are included in Appendix A.

Recent changes, driven by Executive Order (EO) 13327, *Federal Real Property Asset Management*, dated February 4, 2004, have occurred in Department of Defense (DoD) and USAF policy regarding management of real property assets. Especially relevant to the

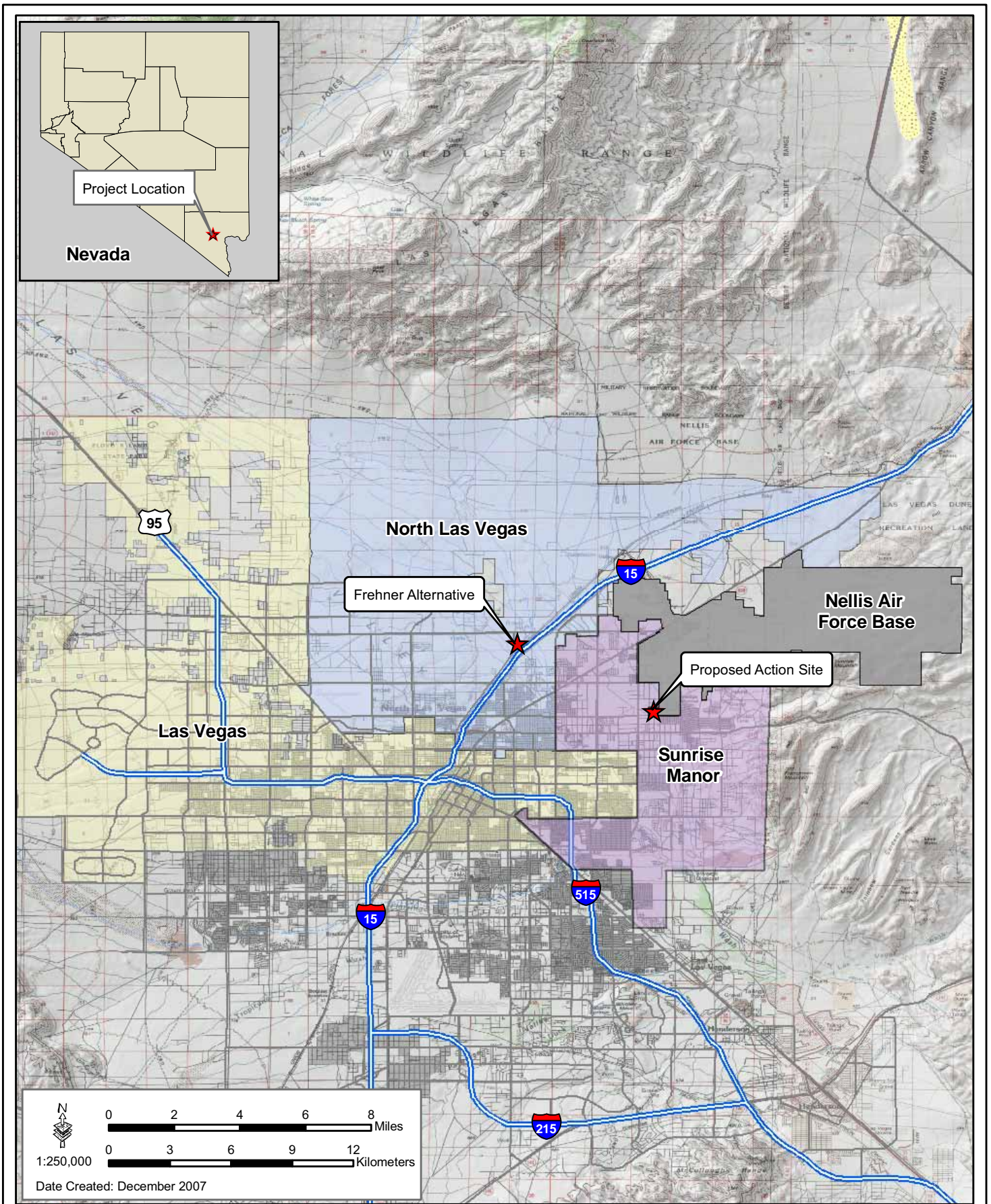


Figure 1-1: Vicinity Map

Proposed Action is the directive to seek efficient and economic opportunities for cooperative real property transactions that would result in benefits for both the installation and the general public.

This concept is definitive of an EUL as provided by the expanded authority of 10 USC 2667. Consequently, the CNLV again communicated to Nellis AFB their interest in potentially locating the WRF on the preferred Nellis AFB site.

Nellis AFB was initially constructed in 1941 as a temporary U.S. Army Air Base, and became a permanent USAF installation on March 31, 1948. Over the past six decades, the Nellis AFB mission, personnel, and infrastructure, have experienced steady growth; but, as is the case with the CNLV, infrastructure has aged, requiring repair and expansion to meet current demands. An EUL to the CNLV would provide Nellis AFB a cost-effective opportunity to replace portions of aging infrastructure and reduce installation wastewater disposal costs. The proposed EUL would also benefit the public by reducing project costs, which are ultimately the CNLV and Clark County customer costs, for the proposed WRF project.

In addition to infrastructure improvements, the EUL of the acreage adjacent to Sloan Channel to the CNLV for the WRF would assist Nellis AFB in complying with EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, signed January 24, 2007. Among other directives, this EO tasks Federal agencies to begin in 2008 to “reduce water consumption intensity, relative to the baseline of the agency’s water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015, or 16 percent by the end of fiscal year 2015.” The acreage identified for the Proposed Action is located on the Nellis AFB Sunrise Golf Course, and contains five holes and greens with surrounding fairways. Elimination of nearly 40 acres of golf course greens and fairways would decrease water consumption and, thus, assist Nellis AFB in meeting EO 13423 conservation goals.

## **1.2 LOCATION OF THE PROPOSED ACTION**

Nellis AFB is located in the northern Las Vegas Valley, in Clark County, Nevada (see Figure 1-1). The subject property of this EA comprises approximately 40 acres of the southwest corner of Nellis AFB, and is currently used as part of the Nellis AFB golf course (Figure 1-2). The





Figure 1-2: Proposed Action Site



property is located at the corner of East Carey Road and Betty Lane in Clark County. Nellis AFB proposes to enter into an EUL of the subject property to the CNLV for the purpose of constructing and operating a WRF on the property.

### **1.3 SCOPE OF ENVIRONMENTAL REVIEW**

The EA describes and analyzes the potential environmental impacts of the activities associated with the Proposed Action and viable alternatives that meet the stated purpose and need. Consistent with the CEQ regulations, the scope of analysis presented in this EA is defined by the potential range of environmental impacts that would result from implementation of these alternatives. Resources that would not be affected by implementation of any of the alternatives are not addressed.

Resources that have a potential for impact were considered in more detail in order to provide the Air Force decision maker with sufficient evidence and analysis to determine whether or not additional analysis is required pursuant to 40 CFR Part 1508.9. The resources analyzed in more detail are socioeconomics, land use, aesthetics, hazardous substances, soils, water resources, air quality, noise, biological resources, cultural resources, safety, and environmental justice. The affected environment and the potential environmental consequences relative to these resources are described in Sections 3.0 and 4.0, respectively.

A previous EA prepared for a viable alternative site for the WRF was completed by the CNLV for RECLAMATION in 2007, and this EA incorporates by reference much of the data, where appropriate, from the 2007 EA. Assessments of viable alternatives and the CNLV WRF needs are incorporated by reference from that EA, which is included in Appendix A. Because RECLAMATION would also fund a portion of the WRF costs for the Proposed Action, RECLAMATION is a cooperating agency for this EA.

### **1.4 FEDERAL, STATE, AND LOCAL PERMITS, LICENSES, AND FEES**

The Proposed Action would require that the CNLV acquire permits from various regulatory agencies. Since the Proposed Action would disturb an area greater than 1 acre, a National Pollutant Discharge Elimination System (NPDES) Storm Water Construction permit would be required prior to construction. This permit would require that a Storm Water Pollution

Prevention Plan (SWPPP) and Notice of Intent be prepared and filed with the Nevada Division of Environmental Protection (NDEP). There are no Waters of the U.S. (WUS) or wetlands on the Proposed Action site, so no Clean Water Act (CWA) Section 404 or related permits would be required. A NPDES permit would be required for the discharge of reclaimed water into Sloan Channel, and a water reuse permit would be required for use of reclaimed water for other uses. A Section 401 Water Quality Certification and authority to construct would be required from NDEP. An air quality emissions permit and authority to construct would also be required from Clark County Department of Air Quality and Environmental Management. These permits would be secured by the CNLV or its contractor, and would be coordinated through the Nellis AFB, Civil Engineering, Environmental Flight, Compliance Section. No permits would be acquired by Nellis AFB.

## **1.5 RELATED ENVIRONMENTAL DOCUMENTS**

The documents listed below have been prepared for Nellis AFB. These documents provided supporting information for the environmental analysis contained within this EA.

- Nellis Draft Integrated Natural Resources Management Plan (INRMP 2007a)
- Nellis Integrated Cultural Resources Management Plan (ICRMP 2006)
- Phase I Environmental Baseline Survey for the Real Property Transaction Between Nellis AFB and the City of North Las Vegas for Construction of a Wastewater Treatment Facility (Nellis AFB 2007b)

The CNLV prepared numerous documents regarding WRF alternative site assessments, WRF needs assessments, and other evaluations of alternative WRF sites within the city. Supporting information from the documents listed below was used wherever possible to complete this EA:

- Phase I Environmental Site Assessment of Approximately 21 Acres of Land Near Intersection of Losee Road and Frehner Road, North Las Vegas, Nevada (Converse 2006a)
- Phase II Environmental Site Assessment of Approximately 21 Acres of Land Near Intersection of Losee Road and Frehner Road, North Las Vegas, Nevada (Converse 2006b)
- City of North Las Vegas WRF Site Selection Study (CNLV 2005)
- Final North Las Vegas Water Reclamation Facility Environmental Assessment (U.S. Department of the Interior [DOI], RECLAMATION 2007)
- The CNLV Water Reclamation Facility, Nellis AFB Site Evaluation Study (CNLV 2007a)

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**SECTION 2.0**  
***DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES***





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## **2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

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The Proposed Action includes the issuance of a long term EUL of 40 acres with subsequent construction of a regional WRF by the CNLV.

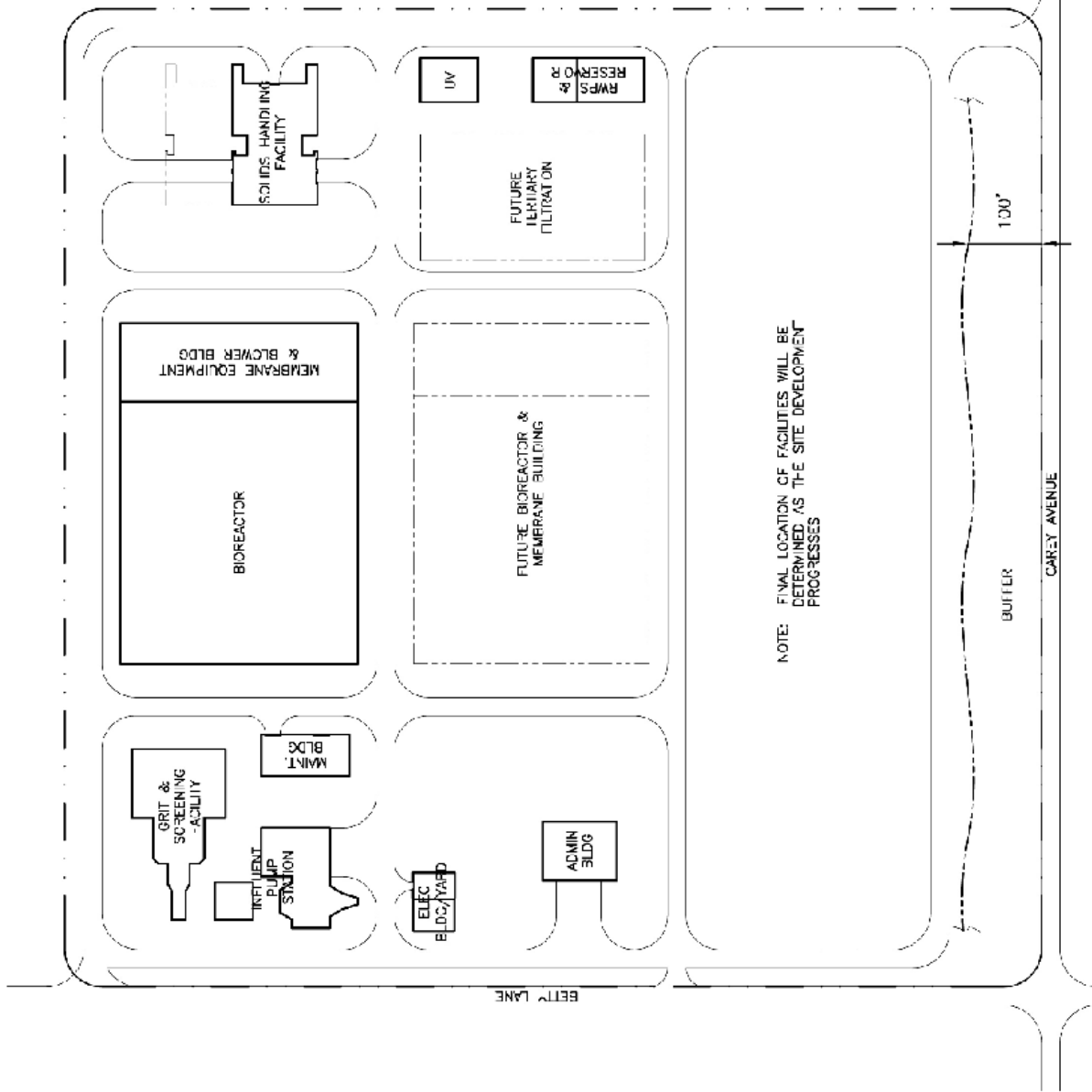
### **2.1 DESCRIPTION OF THE PROPOSED ACTION**

The USAF proposes to initiate a long-term EUL to the CNLV for approximately 40 acres of Nellis AFB property located at the southwest corner of the installation (see Figure 1-2). The designated property is currently developed, functioning as a section of the Nellis AFB Sunrise Golf Course. The acreage contains five holes and surrounding greens and fairways, two concrete ponds, and a restroom facility and associated electrical transformer. These improvements would be demolished or relocated.

The CNLV, in a cooperative endeavor, proposes to construct and operate a WRF on the leased property. Clark County, Nevada; Clark County Water Reclamation District; Southern Nevada Water Authority; and the Clean Water Coalition would cooperate with the CNLV in the proposed project. The Proposed Action includes the issuance by USAF to the CNLV of a long term EUL of 40 acres for subsequent construction of a regional WRF. RECLAMATION, subject to Congressional appropriation and availability of funding, would partially fund the project and therefore, is a cooperating agency in this action.

The initial WRF would be constructed to process 20 mgd, and later expansion would ultimately allow the WRF to treat 50 mgd of wastewater. Most of the WRF process structures would be below ground, extending no more than 6 to 10 feet above ground level. The processing facilities would utilize membrane technology, ultraviolet (UV) disinfection, filtered air emissions for odor control, and solids reduction technology. All processing and holding basins would be completely covered. Gated security walls and fencing would surround the WRF, and access would be secured 24-hours, 7 days per week.

The proposed WRF would include administration, maintenance, and process buildings, which would be constructed of concrete block and painted to blend with the surrounding landscape. None of the structures would exceed 55 feet in height. The WRF would be located on the north portion of the project site, as shown in Figure 2-1.



Not to Scale  
Date Created: December 2007

Figure 2-1: Proposed Action Site Layout

Reclaimed water would be discharged to Sloan Channel, located approximately 500 feet east of the property (see Figure 1-2), although the CNLV would also supply some reclaimed water to Nellis AFB for non-potable, water conservation uses.

Benefits for Nellis AFB from the EUL to the CNLV would include replacement of aging infrastructure, reclaimed water for irrigation of the golf course, the ability to produce reverse osmosis quality water for aircraft wash down and other uses, and reduced cost for wastewater treatment.

## **2.2 ALTERNATIVES TO THE PROPOSED ACTION**

### **2.2.1 Introduction**

Alternatives to the Proposed Action for the CNLV and RECLAMATION were addressed in an EA developed for RECLAMATION by the CNLV (RECLAMATION 2007), and are incorporated herein by reference. These alternatives and the No Action Alternative are described below.

### **2.2.2 USAF: No Action Alternative**

The only alternative to the current Proposed Action for the USAF would be the No Action Alternative. The USAF would not lease the 40 acres to the CNLV for construction and operation of a WRF. The USAF would use alternative methods to fund projects to repair or replace aging infrastructure.

### **2.2.3 Bureau of Reclamation: Frehner Site**

If the USAF No Action Alternative is selected, RECLAMATION would not provide funding to the CNLV for the construction and operation of a WRF at the Nellis AFB site. Funding would be provided for the WRF to be constructed on the 21-acre Frehner Site, owned by the CNLV and located approximately 3.6 miles northwest of the Nellis AFB site (Figure 2-2). This action was previously assessed by the RECLAMATION EA. The EA resulted in a FONSI signed by the RECLAMATION Resources Management Office Director on September 13, 2007. The 2006 RECLAMATION EA and FONSI are included as Appendix A in this EA. Estimated projected project cost savings resulting from selection of the Proposed Action would not be realized at the Frehner Site. The construction cost of this alternative to the CNLV would be approximately \$72 million more than the Proposed Action (CNLV 2007a).



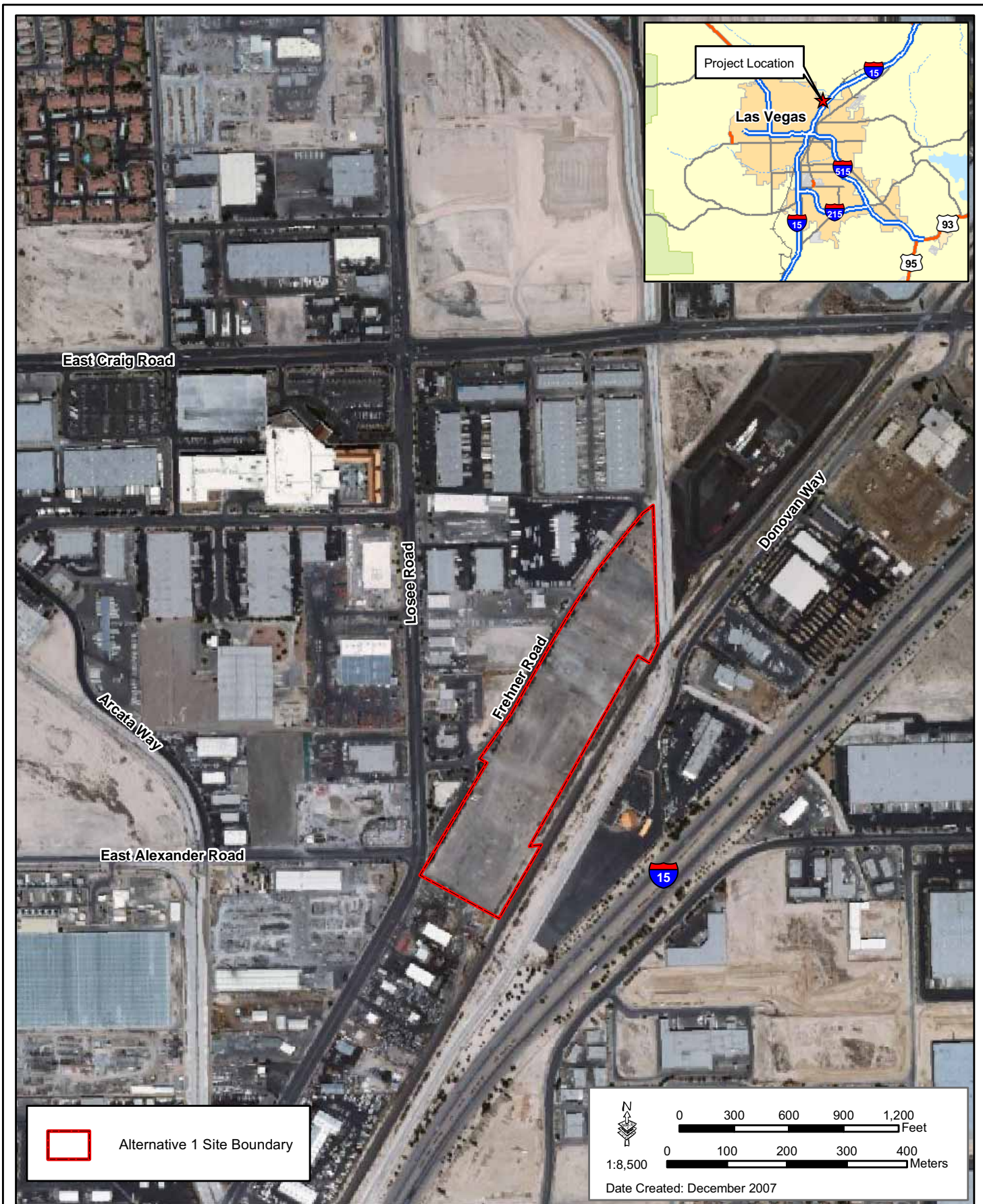


Figure 2-2: Alternative 1 Site

In addition, the Frehner Site is smaller than the preferred site, which limits the type of treatment process available, and would require lining of the effluent ditch for a distance of 32,000 feet at considerable cost. The smaller site would also limit expansion of the WRF as future capacity needs develop in the CNLV and surrounding communities. Wastewater transportation to the site would also require a difficult pipe layout and numerous pump stations to deliver the wastewater for treatment.

## **2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION**

As part of a study conducted by the CNLV to assess alternative sites for a WRF, numerous other locations were evaluated within the CNLV. These sites were described in detail in the site selection study document (CNLV 2005) and in the EA completed for the Frehner Site (RECLAMATION 2007). These alternative sites were not selected for various reasons pertaining to cost, operational logistics and socioeconomic factors. These alternative sites and analyses are incorporated herein by reference (CNLV 2005, RECLAMATION 2007).

## **2.4 NO ACTION ALTERNATIVE**

CEQ regulations require an analysis of a No Action Alternative. A No Action Alternative in which no WRF would be constructed was evaluated in a previous EA completed for the Frehner site (RECLAMATION 2007), and discussions of that No Action Alternative are incorporated herein by reference.

## **2.5 SUMMARY OF ENVIRONMENTAL IMPACTS**

Table 2-1 presents a summary of the impacts anticipated under the Proposed Action and USAF No Action Alternative.

**Table 2-1. Summary of Environmental Impacts**

<b>Effected Resource</b>	<b>Proposed Action</b>	<b>USAF No Action</b>
<b>Land Use</b>	Land use change within Nellis AFB would occur, but the land would still be a military reservation.	No impacts would occur.
<b>Soils</b>	Up to 40 acres of soils would be disturbed, but mitigation measures would make the impacts insignificant.	No impacts would occur.
<b>Aesthetics</b>	Although a reduction in visual resources would occur in the vicinity of the project site, the impacts would be less than significant due to landscaping and other mitigation measures.	No impacts would occur.
<b>Air Quality</b>	Short-term and minor impacts to air quality would occur during construction.	No impacts would occur.
<b>Noise</b>	Noise would be generated during the construction of the WRF, but it would be short-term and insignificant when compared to the 70 DNL noise currently generated by Nellis AFB aircraft.	No impacts would occur.
<b>Water Resources</b>	Minor impacts to local drainage ways would occur due to discharge of reclaimed water. Long-term beneficial effects due to reduced groundwater withdrawal.	No impacts would occur.
<b>Biological Resources</b>	No native biological resources or habitats exist on the project site; therefore, there would be no significant impacts.	No impacts would occur.
<b>Socioeconomics, Environmental Justice and Protection of Children</b>	Socioeconomic and Environmental Justice issues would be insignificant, since benefits would accrue to all citizens in the area affected. Measures to prevent children access would prevent impacts to children.	Adverse long-term impacts would occur due to increased wastewater treatment costs for the CNLV and Nellis AFB.
<b>Cultural Resources</b>	No impacts would occur. Nevada State Historic Preservation Officer (SHPO) concurs that no resources are present.	No impacts would occur.
<b>Hazardous Material</b>	No hazardous materials are located on the project site. Hazardous materials management and spill and pollution prevention plans would be implemented during construction and use. Impacts would be insignificant.	No impacts would occur.
<b>Safety</b>	Safety response for the property would shift to Clark County, and all Office of Safety and Health Administration (OSHA) requirements would be followed, so no significant safety impacts would occur.	No impacts would occur.

***SECTION 3.0***  
***AFFECTED ENVIRONMENT***





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## 3.0 AFFECTED ENVIRONMENT

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### 3.1 INTRODUCTION

This chapter describes the existing environmental conditions at and surrounding the 40-acre site on Nellis AFB. It provides information to serve as a baseline from which to identify and evaluate environmental changes resulting from the proposed EUL, as well as the construction and use of the WRF. The existing environmental conditions at and surrounding the RECLAMATION Frehner Site are incorporated by reference from the previous EA for that site (RECLAMATION 2007), and will not be addressed in this EA.

Only those resources that have a potential to be affected are discussed, as per CEQ guidance (40 CFR 1501.7[3]). Therefore, the following resources will not be discussed for the following reasons:

Climate - The project would not affect, or be affected by, climate.

Wetlands and Waters of the U.S. - There are no hydric soils or Waters of the U.S. (WUS) on the project site and no potential jurisdictional wetlands were identified.

Transportation - The project would not require any long-term public road closures, significantly increase traffic on existing roads, nor affect other modes of public transportation.

Paleontological Resources - No paleontological resources are likely to exist on or near the project site.

Farmlands - No farmlands exist on or near the project site.

Wilderness - The project site is not located in or near a wilderness area.

Wild and Scenic Rivers - No wild and scenic rivers exist in proximity to the project site.

Fire Management - The project site is not located in a fire risk area, and local building codes would regulate fire control following construction.

Floodplain - The project site is not located within a floodplain, and would not affect other floodplain designations.

### **3.2 LAND USE**

The 40-acre Proposed Action site is currently being used as part of the Nellis AFB Sunrise Golf Course, and the entire site is developed with fairways, greens, cart paths, ponds and a restroom facility. Public access is denied by the Nellis AFB perimeter security fence, and the general public does not have use of the Nellis AFB golf course. As part of the golf course, the landscape would be considered green space with recreational use on a military reservation. Non-military lands surrounding the golf course are all developed areas, including industrial, commercial and residential uses (see Figure 1-2).

### **3.3 GEOLOGY AND SOILS**

The CNLV and Nellis AFB are located within the Las Vegas Valley, which is a topographical depression trending across Clark County, Nevada and surrounded by mountain ranges. Tectonically, the Las Vegas Valley is underlain by a series of Miocene strike-slip faults and normal Quaternary faults capable of producing significant earthquakes. Much of the recent fault movement has been normal faulting associated with subsidence as a result of groundwater withdrawal (University of Nevada Las Vegas [UNLV] 2003).

#### *Proposed Action Site*

The geology of the Proposed Action site is associated with its location in the Las Vegas Valley, as described above. No known active faults are located on the property. Soils on the Proposed Action site have been mapped as Bracken series very gravelly and fine sandy loam around the perimeter of the property and wherever vegetation is absent (Nellis AFB 2007b). Imported organic loam has been placed on the golf course fairways, greens and tee boxes to support the irrigated turf grasses. The project site slopes slightly from north to south by about 10 feet across the site, and erosion potential is low.

The Proposed Action site is also located adjacent to the closed Nellis AFB landfill, Environmental Restoration Program (ERP) Site LF-01, and leachate from that site was detected in monitoring wells adjacent to the Proposed Action site (Nellis AFB 2007b). Subsurface geologic strata would be the same on both sites; however, Sloan Channel would be expected to interrupt any surface water flow from the landfill site groundcover to the Proposed Action site, which is located at a lower elevation than the landfill.

### 3.4 AESTHETICS

The Proposed Action site is currently landscaped as part of the Nellis AFB golf course, and, as such, provides open space and green space in an otherwise developed urban setting (Photograph 3-1). The areas adjacent to the project site to the north and west are occupied by industrial businesses, including automobile and construction debris recyclers. To the south of the project site, the adjacent areas are occupied by urban housing, small businesses and a county park and school. The closed Nellis AFB landfill, ERP Site LF-01, is located east of the project site (Nellis AFB 2007b). The visual effect of the current use of the project site is an open golf course landscape with industrial buildings and scrap yards in the background.



**Photograph 3-1. The visual resources of the Nellis AFB golf course are characterized by open space.**

### 3.5 AIR QUALITY

Clark County is classified as a serious non-attainment area for particulate matter (PM-10) and carbon monoxide (CO) and a moderate non-attainment area for the 8-hour ozone National Ambient Air Quality Standards (NAAQS) (U.S. Environmental Protection Agency [EPA] 2007). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 3-1. Areas that do not meet these standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. Air emissions from internal combustion engines produce volatile organic compounds (VOCs) and nitrogen oxides (NOx), which are precursor molecules that react with oxygen in the atmosphere to create ozone. CO in Clark County is a result of combustion by-products produced by cars, trucks, and industrial operations utilizing petroleum for energy needs. The sources of PM-10 include natural wind storms, wind blown dust from agricultural and construction operations and emissions from the combustion of hydrocarbons in cars, trucks, generators and industrial equipment.



**Table 3-1. National Ambient Air Quality Standards**

<b>POLLUTANT</b>	<b>STANDARD VALUE</b>	<b>STANDARD TYPE</b>
<b>Carbon Monoxide (CO)</b>		
8-hour average	9ppm (10mg/m <sup>3</sup> )**	P
1-hour average	35ppm (40mg/m <sup>3</sup> )**	P
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>		
Annual arithmetic mean	0.053ppm (100µg/m <sup>3</sup> )**	P and S
<b>Ozone (O<sub>3</sub>)</b>		
8-hour average*	0.08ppm (157µg/m <sup>3</sup> )**	P and S
1-hour average*	0.12ppm (235µg/m <sup>3</sup> )**	P and S
<b>Lead (Pb)</b>		
Quarterly average	1.5µg/m <sup>3</sup>	P and S
<b>Particulate&lt;10 micrometers (PM-10)</b>		
Annual arithmetic mean	50µg/m <sup>3</sup>	P and S
24-hour average	150µg/m <sup>3</sup>	P and S
<b>Particulate&lt;2.5 micrometers (PM-2.5)</b>		
Annual arithmetic mean	15µg/m <sup>3</sup>	P and S
24-hour average	65µg/m <sup>3</sup>	P and S
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>		
Annual average mean	0.03ppm (80µg/m <sup>3</sup> )	P
24-hour average	0.14ppm (365µg/m <sup>3</sup> )	P
3-hour average	0.50ppm (1300µg/m <sup>3</sup> )	S

Legend: P= Primary  
S= Secondary

Source: EPA 2007.

ppm = parts per million  
mg/m<sup>3</sup> = milligrams per cubic meter of air  
µg/m<sup>3</sup> = micrograms per cubic meter of air

\* Parenthetical value is an approximate equivalent concentration

### 3.5.1 Conformity Rule Requirements

The General Conformity Rule applies to areas that have been designated as a non-attainment zone for one or more criteria pollutants. Clark County is in non-attainment for PM-10, CO, and ozone. Regulations set forth in 40 CFR 51 Subpart W-Determining Conformity of the General Federal Action to State or Federal Implementation Plans determine if additional permits are needed. According to 40 CFR 51.853(b), Federal actions require a Conformity Determination for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs 40 CFR 51.853(b)(1) or (2). If emissions from a Federal action do not exceed *de minimis* thresholds, and if the Federal action is not considered a regionally significant action, it is exempt from further conformity analysis.

### 3.6 NOISE

Noise is generally described as unwanted sound, which can be based either on objective effects (*i.e.*, hearing loss, damage to structures, etc.) or subjective judgments (*e.g.*, community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound exposure level (SEL). The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Acceptable noise levels have been established by the U.S. Department of Housing and Urban Development (HUD) for construction activities in residential areas:

- **Acceptable** (not exceeding 65 dB) – The noise exposure may be of some concern, but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.
- **Normally Unacceptable** (above 65 but not greater than 75 dB) – The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building constructions may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.
- **Unacceptable** (greater than 75 dB) – The noise exposure at the site is so severe that the construction costs to make the indoor noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.

As a general rule of thumb, noise generated by a stationary noise source, or “point source,” will decrease by approximately 6 dB over hard surfaces and 9 dB over soft surfaces for each doubling of the distance. For example, if a noise source produces a noise level of 85 dBA (A-weighted decibel) at a reference distance of 50 feet over a hard surface, then the noise level would be 79 dBA at a distance of 100 feet from the noise source, 73 dBA at a distance of 200 feet, and so on. To estimate the attenuation of the noise over a given distance the following relationship is utilized:

$$\text{Equation 1: } dBA_2 = dBA_1 - 20 \log (d_2/d_1)$$

Where:

$dBA_2$  = dBA at distance 2 from source (predicted)

$dBA_1$  = dBA at distance 1 from source (measured)

$d_2$  = Distance to location 2 from the source

$d_1$  = Distance to location 1 from the source

Source: California Department of Transportation, 1998

### *Proposed Action Site*

Two residential neighborhoods are located adjacent to the project site: one neighborhood on the southwest corner and another on the southeast corner. A public park is adjacent to the southern boundary of the Proposed Action site, and an elementary school is located 875 feet south of the Proposed Action site. The neighborhood on the southeast corner is approximately 100 feet from the corner of the Nellis AFB property and contains the nearest sensitive noise receptors to the project site.



**Photograph 3-2. Industrial activity adjacent to the Proposed Action Site**

Properties to the north and west of the Proposed Action site are industrial, and commonly generate noise levels greater than those associated with the proposed construction and operation of the WRF (see Photograph 3-2). The Proposed Action site is also located within the 70 day/night average sound level (DNL) noise contour for aircraft operations at Nellis AFB (Figure 3-1).

## **3.7 WATER RESOURCES**

The water resources sections in this document encompass the surface and groundwater features in the project site and the potential effect of the proposed construction and operational actions on these resources. Factors that make water resources essential in southern Nevada, and within the CNLV, include unprecedented population growth, the arid climate of the area, limited water resources and increased protection against drought.

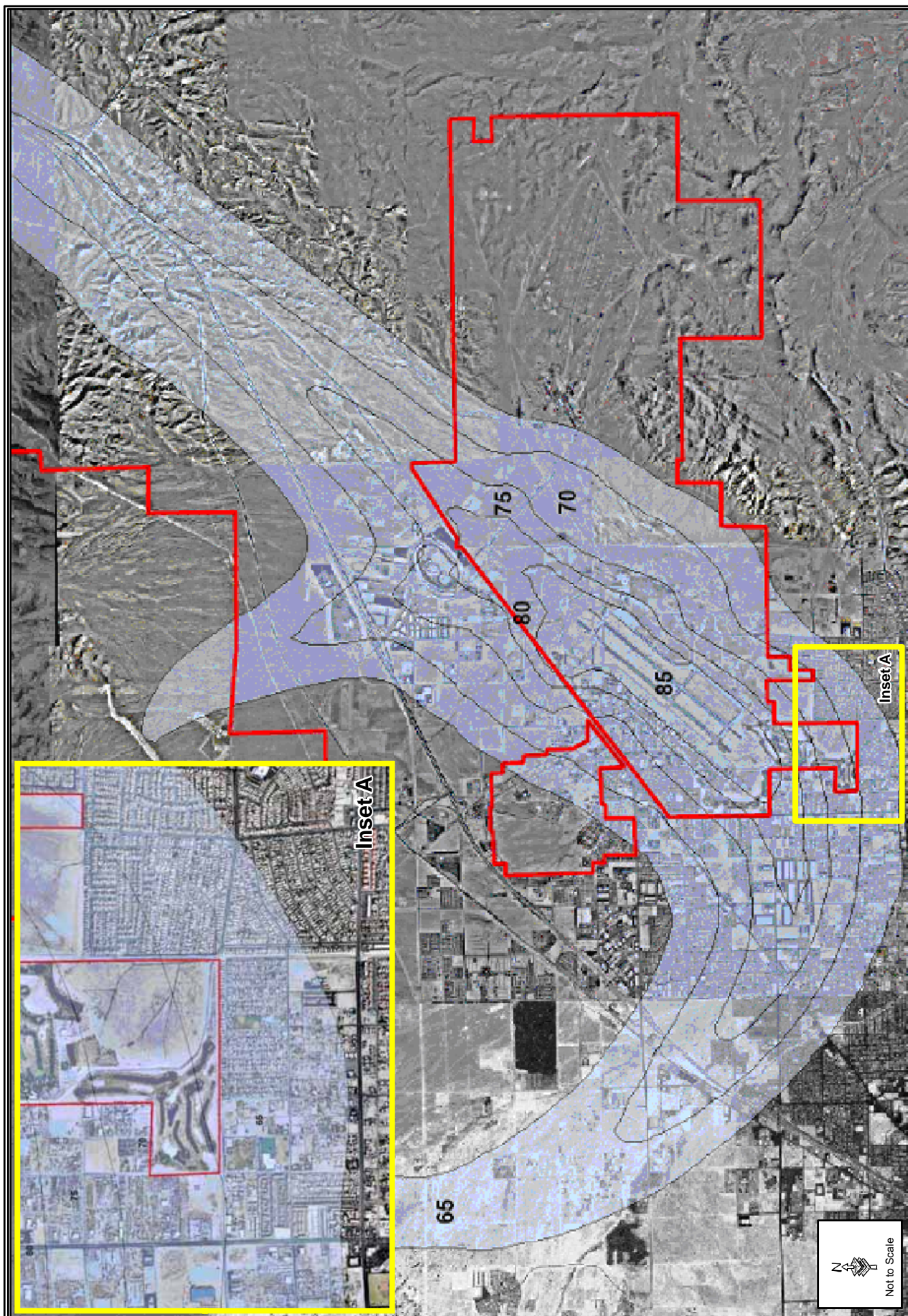


Figure 3-1: Nellis AFB Noise Effects Contour Map (DNL Noise Levels)



The Las Vegas Valley has an evaporation rate of approximately 72 inches per year, compared to an annual precipitation rate of only 4 inches per year. In regard to resources, the valley is limited legally in the amount of water that can be diverted from the Colorado River, and hydrologically in what can be pumped from the groundwater system. Based on the 1922 Colorado River Compact, and a 1964 Supreme Court Decree in Arizona vs. California, Nevada has a “consumptive use” of 300,000 acre-feet per year from the Colorado River. The principal groundwater aquifer in the Las Vegas Valley has been estimated to have a sustainable yield of approximately 40,000 acre-feet per year, and accounts for up to 39 per cent of water use in the valley, with the remainder coming from Lake Mead (Las Vegas Valley Water District 2008).

### **3.7.1 Surface Water**

Surface water on the Proposed Action site consists of two man-made concrete-lined ponds which collect storm water and irrigation runoff from the golf course (Photograph 3-3). There are no wetlands or WUS on the project site. Sloan Channel, a storm water runoff channel for Nellis AFB, is located approximately 500 feet east of the Proposed Action site. Sloan Channel is lined with concrete to prevent erosion of the banks. It may be considered a jurisdictional WUS, since flow in the channel would enter the natural stream system, and eventually the Colorado River.



**Photograph 3-3. Golf course pond on the Proposed Action site**

### **3.7.2 Hydrogeology/Groundwater**

The CNLV is situated on the eastern side of Las Vegas Valley. Although this is a structurally formed basin, the Las Vegas Valley is filled with a considerable volume of alluvial sediments. This sediment volume and thickness has allowed a substantial groundwater reservoir (aquifer) to accumulate, which has historically provided a significant portion of the water supply for the City of Las Vegas and the surrounding communities. Groundwater currently accounts for about 29 percent of the water supply for Nellis AFB (Nellis AFB 2007a).

The primary water supply aquifers are situated at depths of at least 100 feet below ground surface (bgs) and in some areas more than 200 feet bgs. The gradient of the upper surface of the primary aquifer (the water table) generally slopes downward toward the east; the groundwater flow within Las Vegas Valley is generally from west to east. The nature of the current climate (arid) and the composition of the underlying sediments (from carbonate rock sources) combine to promote the formation of a shallow hardpan layer within depths of up to 20 feet bgs. This commonly results in the establishment of perched aquifers, especially where artificial sources of water are allowed to seep into the ground (Nellis AFB 2007a).

#### *Proposed Action Site*

The Proposed Action site is located adjacent to the closed Nellis AFB landfill, which has been closed with no further restoration action planned (NFRAP). As part of the closure actions for the landfill, groundwater monitoring wells were installed along the east side of the Proposed Action site. Water table levels in these wells indicated a depth to shallow groundwater of 50 feet bgs in the shallow aquifer. Recent analysis of groundwater collected from the monitoring wells confirmed that groundwater in the shallow aquifer under the Proposed Action site is not contaminated by leachate from the landfill (Nellis AFB 2007b).

### **3.8 BIOLOGICAL RESOURCES**

#### **3.8.1 Vegetation**

Vegetation within the Proposed Action site is limited to golf course turf grass and other ornamental trees and shrubs planted by golf course personnel. No native vegetation community remains on the site.

#### **3.8.2 Wildlife**

During a reconnaissance-level survey of the Proposed Action site in August 2007, several bird species were observed, including mourning dove (*Zenaida macroura*), great-tailed grackle (*Quiscalus mexicanus*), black-throated sparrow (*Amphispiza bilineata*) and killdeer (*Charadrius vociferous*). A single jackrabbit (*Lepus californicus*) was also observed on the golf course. Due to significant human activity and lack of suitable habitat, it is unlikely that the Proposed Action site would support substantial wildlife populations.

### 3.8.3 Sensitive Species

The U.S. Fish and Wildlife Service's (USFWS) responsibilities under the Endangered Species Act (ESA) include: (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

In addition, the USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which the USFWS has sufficient information on hand to support proposals to list as endangered or threatened under the ESA. However, proposed rules have not yet been issued because such actions are precluded at present by other listing activity. Candidate species and Species of Concern currently have no legal protection under the ESA. However, they may be protected under other Federal or state laws. Appendix C contains a table of Federally listed species potentially occurring in Clark County.

Of the 16 Federally listed species known to occur in Clark County, none of these species are found within the project site. Ten species of fish, one bird, and one amphibian are aquatic-specific species, and their known habitat occurs outside of the project site. Additionally, the Federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*) is normally associated with riparian habitats which are absent in the project site. The desert tortoise (*Gopherus agassizii*) is known to occur within the Mojave Desert. The project site is located within this desert, but does not contain suitable habitat or food resources for the tortoise. This species prefers flats and alluvial fans habitat and native grasses and cacti food resources, none of which is found in the project site. There is no critical habitat designated for threatened or endangered species located at or near the Proposed Action site.

The Nevada Department of Conservation and Natural Resources (DCNR) maintains the Natural Heritage Program (Nevada Natural Heritage Program 2007). This program lists endangered, threatened, rare, and sensitive species in Nevada. This list includes flora and fauna whose occurrence in Nevada is or may be in jeopardy, or with known or perceived threats or population declines. Approximately 70 plant, 25 invertebrate, four fish, one amphibian, one reptile, 15 mammal, and six bird species are considered at-risk in Clark County. An additional 27 plant, two invertebrate, and 31 vertebrate species are on the watch-list for Clark County. Many of

these species are protected by Nevada State laws; Nevada Administrative Code [NAC] 503 outlines wildlife species that are protected, and Nevada Revised Statutes [NRS] 527 summarizes the native flora protected by Nevada State Law.

There are no habitats present in the Proposed Action site that are known to support fully-protected state species. However, suitable habitat is present near the Proposed Action site for a number of the state at-risk and watch-list plant and animal species. During the site survey on August 22, 2007, one at-risk species, the western burrowing owl (*Athene cunicularia hypugaea*), was observed in the banks of Sloan Channel 500 feet east of the Proposed Action site (see Photograph 3-4). No watch-list species were observed during the survey.



**Photograph 3-4. Burrowing owls in the bank of Sloan Channel**

### **3.9 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN**

#### **3.9.1 Socioeconomics**

Communities in Clark County are currently experiencing rapid growth in population as a result of people moving out of the larger cities and into the suburbs. In 2006, 1,777,539 people lived in Clark County (U.S. Census Bureau [USCB] 2006a) and 190,291 people lived in the CNLV (USCB 2006b). The CNLV (2007) projects a 157 percent population growth by the year 2025. Data from 2004-2005 indicate that the CNLV was the second fastest growing large city in the U.S. (*i.e.*, 100,000 or more population) in 2006 (USCB 2006c) and data from 2005-2006 indicate that the CNLV now has the fastest growth rate (USCB 2007). The Proposed Action site is surrounded by Sunrise Manor (see Figure 1-1), an unincorporated town and census-designated place (CDP). The total 2006 population of Sunrise Manor CDP was 184,739 (U.S. Census Bureau 2006e), an 18 percent increase from 156,120 in 2000 (USCB 2000).

The 2006 per capita income (PCI) of Clark County was \$26,735 (USCB 2006a), \$20,037 for the CNLV (USCB 2006b), \$26,340 for the State of Nevada (USCB 2006d), and \$19,183 for Sunrise



Manor CDP (U.S. Census Bureau 2006e). The PCI of Sunrise Manor CDP residents was at least 27 percent less than the PCI of Clark County, the CNLV or the State of Nevada.

The median household income in 2006 for Clark County was \$53,536 (USCB 2006d) and \$57,242 for the CNLV. These values are higher than the 2006 median household income for the state (\$52,998) and the median household income for the Nation (\$48,451) (USCB 2006d). The median household income for Sunrise Manor CDP in 2006 was \$46,004 (U.S. Census Bureau 2006f). The median household income for Sunrise Manor CDP was lower than the 2006 median household income of Clark County, the CNLV, Nevada and the Nation.

### **3.9.2 Environmental Justice**

EO 12898, Environmental Justice, was issued by the President on February 11, 1994. Objectives of the EO, as it pertains to this EA, include development of Federal agency implementation strategies and the identification of low-income and minority populations potentially affected because of proposed Federal actions. Accompanying EO 12898 was a Presidential Transmittal Memorandum referencing existing Federal statutes and regulations to be used in conjunction with EO 12898. One of the items in this memorandum was the use of the policies and procedures of NEPA when such analysis is required by the NEPA 42 U.S.C. Section 4321 *et. seq.* Specifically, the memorandum indicates that:

*“each Federal agency shall analyze the environmental effects, including human health, economic, and social effects, of federal actions, including effects on minority communities and low-income communities,”*

Although an environmental justice analysis is not mandated by NEPA, DoD has directed that NEPA will be used as the primary mechanism to implement the provision of the EO.

Low-income populations exist in Clark County, the CNLV, and Sunrise Manor CDP. In Clark County, approximately 8 percent of families and 10 percent of individuals were living below the 2006 poverty level (USCB 2006a). In the CNLV, approximately 9 percent and 11 percent of families and individuals were living below the poverty level (USCB 2006b). Approximately 12 percent of families and 13 percent of individuals in Sunrise Manor CDP were living below the poverty level in 2006 (USCB 2006e). The percentage of families and individuals living in poverty in Sunrise Manor CDP in 2006 was greater than both Clark County and the CNLV.

The regions of Clark County, the CNLV and Sunrise Manor CDP have a culturally diverse population. Clark County and the CNLV have 26 percent and 39 percent of their population that claim Hispanic or Latino origin, respectively (USCB 2006a and 2006b). Sunrise Manor CDP has 41 percent of their population that claim Hispanic or Latino origin (USCB 2006e). The 2006 Census also indicates that 19 percent, 17 percent, and 12 percent of the population of Clark County, CNLV, and Sunrise Manor CDP, respectively, are African American (USCB 2006a and 2006b).

#### *Proposed Action Site*

The Proposed Action project site is located adjacent to residential areas populated with low income and minority residents (*i.e.*, residential neighborhoods in Sunrise Manor CDP).

### **3.9.3 Protection of Children**

EO 13045, Protection of Children, requires each Federal agency to:

*“identify and assess environmental health risks and safety risks that may disproportionately affect children”; and “ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”*

This EO was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. In Clark County 461,335 individuals (26 percent of the population) are under 18 years of age and 136,756 individuals (7.7 percent of the population) are under 5 years of age (USCB 2006a). In the CNLV, 66,092 individuals (44.7 percent of the population) are under 18 years of age, and 21,635 (11.4 percent of the population) are under the age of 5 (USCB 2006b). In Sunrise Manor CDP, 56,553 individuals (30.6 percent of the population) are under 18 years of age and 15,516 individuals (8.4 percent of the population) are under 5 years of age (USCB 2006e). The potential for impacts to the health and safety of children would be greater where projects are located near residential areas or schools.

### *Proposed Action Site*

A public park is located directly to the south of the Proposed Action site, across East Carey Avenue (Photograph 3-5). Because of available playground and recreational equipment located at the park, children would likely be present at the park during daytime hours. A public elementary school is located approximately 875 feet south of the Proposed Action site property boundary.



**Photograph 3-5. Public park across Carey Avenue from the Proposed Action site.**

## **3.10 CULTURAL RESOURCES**

The National Historic Preservation Act (NHPA) of 1966 establishes the Federal government's policy to provide leadership in the preservation of historic properties and to administer Federally-owned or controlled historic properties in a spirit of stewardship. The NHPA established the Advisory Council on Historic Preservation (ACHP) to advocate full consideration of historic values in Federal decision-making; review Federal programs and policies to promote effectiveness, coordination, and consistency with National preservation policies; and recommend administrative and legislative improvements for protecting our Nation's heritage with due recognition of other National needs and priorities. In addition, the NHPA also established SHPO to administer National historic preservation programs on the state level and Tribal Historic Preservation Officers (THPO) on tribal lands, where appropriate. The NHPA also established the National Register of Historic Places (NRHP). The NRHP is the Nation's official list of cultural resources worthy of preservation and protection. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Park Service (NPS) administers the NRHP.

Section 106 of the NHPA, as amended, requires Federal agencies to identify and assess the effects of their undertakings on cultural properties included in or eligible for nomination to the NRHP, and to afford the ACHP a reasonable opportunity to comment on such undertakings. Federal agencies must consult with the appropriate state and local officials, Indian tribes,

applicants for Federal assistance and members of the public and consider their views and concerns about historic preservation issues. The ACHP is authorized to promulgate such rules and regulations as it deems necessary to govern the implementation of Section 106 in its entirety. Those regulations are contained in 36 CFR Part 800, "Protection of Historic Properties."

Under Federal regulation, only significant cultural resources warrant consideration with regard to adverse impacts resulting from a Federal undertaking. Significant cultural resources include those that are eligible or recommended as eligible for nomination to the NRHP. The significance of Native American and Euro American archeological resources is evaluated according to the criteria for eligibility to or inclusion to the NRHP, as defined in regulation "National Register Criteria for Evaluation" (36 CFR 60.4) and in consultation with the SHPO.

#### *Proposed Action Site*

All Nellis AFB properties were previously surveyed for cultural resources, including the Cantonment Area, Area II, Area III, and the Small Arms Range, in accordance with 36 CFR 800.4, and are described in cultural resources reports from 1988 to 2001. The reports were reviewed by the Nevada SHPO and concurrence was received on the Air Force determinations. One prehistoric site in Area II is eligible for nomination to the NRHP and is managed as a protected property. Nevada SHPO concurred with Nellis AFB on 12 April 01 that the final inventory and evaluation activities had been completed on Nellis AFB to fulfill requirements of the NHPA (Nellis AFB 2006). No cultural resources sites are located on the Proposed Action site.

### **3.11 HAZARDOUS AND TOXIC SUBSTANCES**

The Proposed Action Site was previously assessed for the presence of hazardous and toxic substances according to American Society for Testing and Materials (ASTM) requirements for Phase I Environmental Site Assessments (ASTM E1527-05). The property was determined to contain no risk due to the presence of hazardous or toxic materials (Nellis AFB 2007b).

### **3.12 SAFETY**

Safety and emergency response for the Proposed Action Site are currently the responsibility of Nellis AFB. The golf course, as part of Nellis AFB, is completely fenced to prevent unauthorized entry of non-military personnel. There are currently no safety-related issues associated with the use of the site as part of the Nellis AFB golf course.

***SECTION 4.0***  
***ENVIRONMENTAL CONSEQUENCES***





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## **4.0 ENVIRONMENTAL CONSEQUENCES**

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### **4.1 INTRODUCTION**

This section of the EA addresses potential impacts on environmental resources within or near the Proposed Action site. An impact (consequence or effect) is defined as a modification of the human or natural environment that would result from the implementation of an action. The impacts can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). The effects can be temporary, short in duration (short-term), long lasting (long-term), or permanent. For purposes of this EA, temporary effects are defined as those that would last for the duration of the construction period; short-term impacts would last from the completion of construction to 3 years. Long-term impacts are defined as those impacts that would occur from 3 to 10 years after construction, while permanent impacts indicate an irretrievable loss or alteration.

Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. Significant impacts are those effects that would result in substantial changes to the environment (40 CFR 1508.27), and should receive the greatest attention in the decision-making process. Insignificant impacts are those that would result in minimal changes to the environment. The significance of the impacts presented in this EA is based upon existing regulatory standards, scientific and environmental knowledge and best professional opinions.

### **4.2 LAND USE**

#### **4.2.1 Proposed Action Site**

Land use within the Proposed Action project site would change from a recreational use as a golf course to a public utility use as a WRF. The project site is currently part of a Federal military reservation, and would remain as such under the EUL to the CNLV. The adjacent properties to the north and west are currently used for industrial purposes, and the proposed WRF operation on the project site would be similar to those adjacent property uses. Property to the east on Nellis AFB contains a narrow strip of the golf course, with the closed Nellis AFB landfill (ERP



Site LF-01) located across Sloan Channel to the east. The proposed WRF construction and operation would not interfere with Nellis AFB land use to the east. Due to the elimination of open golf course ponds and their attraction of migratory waterfowl, the proposed covered WRF treatment basins would reduce Bird Aircraft Strike Hazard (BASH) issues from birds attracted to the golf course and Nellis AFB aircraft using the runway located north of the site.

Properties across Carey Avenue to the south contain a mix of light commercial businesses and single family residences. A Clark County public park and elementary school are also located to the south of the project site. Prior to 1972, a Nellis AFB wastewater treatment plant and lagoon system was operated on adjacent property to the northeast (Nellis AFB 2007b). The proposed use of the property for a WRF would be compatible with the Nellis AFB plan to reduce excess water use and to utilize surplus property for the mutual benefit of Nellis AFB and the surrounding communities. Therefore, there would not be a significant impact on land use.

#### **4.2.2 USAF No Action Alternative**

The Proposed Action site is currently used as a portion of the Nellis AFB Sunrise Golf Course. Under the USAF No Action Alternative, the land use would not change.

### **4.3 GEOLOGY AND SOILS**

#### **4.3.1 Proposed Action Site**

The construction of the WRF on the Proposed Action site would not disturb sensitive geological resources, and no groundwater would be withdrawn during operation of the WRF that might contribute to subsidence, so there would be no impacts on the geology or seismicity of the area.

Short-term impacts on soils from the EUL of the Proposed Action site and construction of the WRF would occur; however, most soils on the project site are not natural soils, but instead are soils imported to support the golf course fairways, greens and other planted ornamental vegetation. Construction methods would employ best management practices (BMPs) to reduce soil erosion, including silt fencing where appropriate, and wetting of excavated soils to prevent dust. Excavation of soils to install the WRF process facilities below grade would result in excess soil material, which would be disposed of or reused elsewhere by the CNLV in a manner consistent with USAF, local and state regulations.

The installation of the WRF on the site would increase the amount of impervious surfaces in the area, having long-term minor impacts on soils. Impervious surfaces reduce the amount of rainwater infiltration and percolation. Impervious surfaces also increase the flow of migrating rainwater which has the potential to disturb adjacent exposed soils. Construction and post-construction BMPs, such as silt fencing and other storm water filtering devices installed as required by the Storm Water Pollution Prevention Plan (SWPPP) developed for the project, would reduce the migration of soils into the local stream network during rainfall events.

The adjacent ERP site, Landfill LF-01, would not be impacted as a result of the Proposed Action. However, due to its proximity, Nellis AFB would be required to request Nevada Division of Environmental Protection (NDEP) concurrence on the Proposed Action. Nellis AFB is in the process of obtaining NDEP concurrence.

In conclusion, up to 40 acres of soils would be disturbed from the construction and operation of the WRF. However, because the soils are previously disturbed and not natural to the site, adjacent natural soils are regionally and locally common, and construction would employ methods to reduce soil erosion as practical, only minor impacts on soils are expected.

#### **4.3.2 USAF No Action Alternative**

Under the USAF No Action Alternative, the EUL would not be executed, and the WRF would not be constructed; thus, the project site would not experience any geological or soil disturbance.

### **4.4 AESTHETICS**

#### **4.4.1 Proposed Action Site**

With the implementation of the Proposed Action, the visual appearance of the project site would change from an open golf course landscape to a modified industrial landscape with a WRF and associated equipment and vehicles parked on the site. The adjacent properties to the north and west are also used for industrial purposes; therefore, an additional industrial development on the Proposed Action site would result in minor visual aesthetic impacts when the project site is viewed from the south, particularly from the public park located on the corner of East Carey Avenue and Betty Lane. The WRF would be constructed in the north portion of the site to minimize visual impacts from East Carey Avenue. Most process structures would be below ground, and the tallest building would be 55 feet tall. Office and warehouse buildings would be

less than 20 feet tall. All buildings and other structures would be painted to resemble a desert landscape, and planted landscaping would be installed to minimize visual intrusion when viewed from the perimeter of the site.

Since the Proposed Action site is currently part of a Federal military reservation, it would be expected that further development of the property could occur. Given the location of the WRF on the north portion of the site and other landscaping and visual BMPs, visual impacts would be less than significant. Because the proposed WRF will be a fully enclosed facility with no unfiltered air emissions, there would be no odors associated with operation of the facility. Therefore, no aesthetic impacts relative to odor would occur in the vicinity of the WRF.

#### **4.4.2 USAF No Action Alternative**

Under the USAF No Action Alternative, no impacts on aesthetics and visual resources would occur because no WRF would be constructed, and the project site would remain as a golf course.

### **4.5 AIR QUALITY**

#### **4.5.1 Proposed Action Site**

Temporary and minor increases in air pollution would occur from the use of construction equipment (combustible emissions) and soil disturbance (fugitive dust) while constructing the WRF.

Combustible emission calculations were made for standard construction equipment, such as bulldozers, excavators, front end loaders, backhoes, cranes, and dump trucks, using emission factors from EPA approved emission model NONROAD6.2 (see Appendix B for model results). Assumptions were made regarding the type of equipment, duration of the total number of days each piece of equipment would be used, and the number of hours per day each type of equipment would be used. The assumptions, emission factors, and resulting calculations are presented in Appendix B.

Fugitive dust calculations were made for disturbing the soils while excavating, and grading and constructing the roads and structures. Fugitive dust emissions were calculated using emission factors from the Midwest Research Institute (MRI 1996).

The total air quality emissions were calculated to determine the applicability of the General Conformity Rule, and are provided in Appendix B. A summary of the total emissions are presented in Table 4-1. These estimates include the emissions generated by construction workers during their commute to and from the project site. As can be seen from this table, the proposed construction activities do not exceed *de minimis* thresholds and, thus, do not require a Conformity Determination.

**Table 4-1. Total Air Emissions (tons/year) from Construction Activities vs. the *de minimis* Levels**

<b>Pollutant</b>	<b>Total (tons/year)</b>	<b><i>De minimis</i> Thresholds (tons/year)</b>
CO	29.11	100
VOCs	6.05	100
NOx	45.43	100
PM-10	56.79	70
PM-2.5	14.44	NA
Sulfur Dioxide (SO <sub>2</sub> )	5.49	NA

Source: 40 CFR 51.853 and GSRC model projections

Several sources contribute to the over-all air impacts of the construction project. The air calculations in Table 4-1 included emissions from:

1. Combustible engines of construction equipment
2. Construction workers commute to and from work
3. Supply trucks delivering materials for construction
4. Fugitive dust from job site ground disturbances

As there are no violations of air quality standards and no conflicts with the State Implementation Plan (SIP), there would be no significant impacts on air quality from the implementation of the Proposed Action.

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment.

This project will require construction permits from the Clark County Department of Air Quality Management. As part of the permit, Clark County would require that airborne particulates be

minimized through a series of control measures designed to control windblown fugitive dust. In particular, wetting solutions would be applied to construction areas to minimize the emissions of fugitive dust. By using these environmental design measures, air emissions from the Proposed Action during construction would be temporary and would not significantly impair air quality in the region. There would be no unfiltered air emissions during operation of the WRF.

#### 4.5.2 USAF No Action Alternative

Under the USAF No Action Alternative, the EUL would not be executed, the WRF would not be constructed, and no additional air emissions would occur. Therefore, there would be no air quality impacts.

### 4.6 NOISE

#### 4.6.1 Proposed Action Site

Table 4-2 presents noise emission and attenuation projections for construction equipment (Federal Highway Administration [FHWA] 2007).

**Table 4-2. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances<sup>1</sup>**

Noise Source	50 feet	100 feet	200 feet	500 feet	1000 feet
Backhoe	78	72	68	58	52
Crane	81	75	69	61	55
Dump truck	76	70	64	56	50
Excavator	81	75	69	61	55
Front end loader	79	73	67	59	53
Concrete mixer truck	79	73	67	59	53
Bull dozer	82	76	70	62	56
Generator	81	75	69	61	55

Source: FHWA 2007 and GSRC

1. The dBA at 50 feet is a measured noise emission (FHWA 2007). The 100 to 1,000 foot results are modeled estimates.

These calculations assumed the worst case scenario of 82 dBA for construction equipment. Noise attenuates over distance, and a projected distance of 300 feet would be required before sound levels of 82 dBA would attenuate to Acceptable levels of 65 dBA. At a distance of 100 feet, noise levels from construction equipment would be attenuated to Normally Unacceptable levels of 75 dBA.

Geographic Information System (GIS) analysis determined that the distance to the nearest residential property from the project boundary (southeast corner) is approximately 100 feet. As many as three single family residences in the northwest corner of the neighborhood may experience Normally Unacceptable noise emissions from construction activities if such activities occur in the southeast corner of the construction site. However, the majority of the construction activities would not occur in the southeast corner of the site.

A residential neighborhood is located approximately 250 feet from the southwest corner of the construction site. Two single family homes are situated within 215 feet of the southwest corner boundary, and may experience Normally Unacceptable noise emissions greater than 65 dBA and less than 75 dBA if construction activities occur in the southwest corner of the project site; however, most construction activities are not planned to take place in the southwest corner of the project site. In conclusion, five single family residents in adjacent neighborhoods may experience Normally Unacceptable noise levels during construction of the WRF; the noise emissions would be intermittent, short term and minor.

The south end of the Proposed Action site and the adjacent residential neighborhoods are located within the mean 65 DNL contour for aircraft noise generated from the runway located to the north on Nellis AFB. Intermittent and temporary noise generated during construction of the WRF at the north end of the project site would generally not exceed current noise levels generated by aircraft operating from Nellis AFB. The park located south of Carey Avenue would also experience intermittent, temporary minor noise impacts during construction. The WRF would be designed to operate very quietly, so there would be no significant noise generated during operation of the WRF. Overall, the noise impacts on adjacent receptors south of the site would be temporary or insignificant.

#### **4.6.2 USAF No Action Alternative**

Under the USAF No Action Alternative, the noise receptors near the project site would not experience additional noise events, since no new construction would take place.

## **4.7 WATER RESOURCES**

### **4.7.1 Proposed Action Site**

#### **4.7.1.1 Surface Water**

The Proposed Action would have minimal impacts on surface water quality. Some temporary water quality impairments may occur if there is a major rain event during the construction of the WRF. Construction activities can disturb soils, which in turn, increase the probability of sediment migration.

Since the construction footprint for the WRF is larger than 1 acre, the CNLV would be required to obtain a Stormwater Construction Permit. A stormwater permit for the Proposed Action is contingent on the development of a SWPPP, which would then be subject to approval by the NDEP. SWPPP requirements include an outline of the storm water drainage system for each discharge point, actual and potential pollutant contact, and surface water locations. The SWPPP would also incorporate storm water management controls, such as silt fencing and other storm water filtering devices. Compliance with the Stormwater Construction Permit and the SWPPP would minimize potential impacts on surface water quantity and quality.

USAF would require that the CNLV ensure avoidance of impacts on the Proposed Action site from hazardous substances (*i.e.*, anti-freeze, fuels, oils, lubricants) used during construction. Although catch pans would be used when refueling, accidental spills could occur as a result of maintenance procedures for construction equipment. A spill could result in adverse impacts to on-site soils and waters. However, the amount of fuel, lubricants, and oil is limited, and equipment necessary to quickly contain any spills would be present when refueling. USAF would require that the CNLV ensure that a Spill Prevention, Control and Countermeasures Plan (SPCCP) would be in place prior to the start of construction, and all personnel would be briefed on the implementation and responsibilities of this plan.

Construction equipment and operations may create miscellaneous operational pollution, such as oil leaks, mud spatters, and discards from human activities. USAF would require that an adequate number of latrines and covered trash cans are available at the job site, and that any leaks or spills from construction equipment are cleaned up. BMPs for construction site soil erosion, as specified in the SWPPP and the Storm Water Construction Permit, would be implemented to prevent the migration of soils, oil and grease and construction debris into the

local stream networks. No significant impacts on surface water during construction would be expected.

A NPDES permit would be required for the WRF reclaimed water discharge into Sloan Channel. Water flows in Sloan Channel are currently limited to storm water runoff from other areas of Nellis AFB, and the discharge of up to 20 mgd of reclaimed water would increase the daily sustained flow above current levels. Sloan Channel is concrete lined, and the flow capacity is large enough that a 20 mgd flow would not significantly impact erosion of the channel banks, and would not exceed the flow capacity such that flooding would occur; impacts relative to erosion and flooding would be insignificant. Reclaimed water discharged into Sloan Channel would be cleaned and treated according to requirements of the NPDES discharge permit, such that no pollutants of concern would be present in the discharge.

The existing golf course ponds on the Proposed Action site would be filled, but these ponds are man-made, concrete-lined ponds that do not contribute to the surface water hydrology of the area.

#### **4.7.1.2 Groundwater**

Currently, the Nellis AFB golf course is irrigated with water from Nellis AFB wells (USAF water rights), which tap into the Las Vegas Valley aquifer system. The average amount of water used to irrigate the entire golf course is about 450 million gallons per year (423 million gallons in fiscal year 2006; 474 million gallons in fiscal year 2007) (Blazi 2008). Since reclaimed water would be used for irrigation and other non-potable uses, Nellis AFB would be drawing far less water from the Las Vegas Valley aquifer system, which would cumulatively benefit the entire valley (4.5 billion gallons less every 10 years). Percolation of reclaimed water used for irrigation would also add to near-surface groundwater resources, resulting in a long-term beneficial effect for Nellis AFB and surrounding areas.

#### **4.7.2 USAF No Action Alternative**

There would be no EUL executed and no construction or operation of the WRF under the USAF No Action Alternative; therefore, there would be no adverse or beneficial impacts on water resources.



## **4.8 BIOLOGICAL RESOURCES**

### **4.8.1 Vegetation**

#### ***4.8.1.1 Proposed Action Site***

With the implementation of the Proposed Action, up to 40 acres of non-native, maintenance vegetation would be disturbed by the construction and use of the WRF. Landscape vegetation would be replanted as part of the project for aesthetic and BMP purposes. There would be no impacts on native vegetation or significant habitat; therefore, impacts on vegetation would be insignificant.

#### ***4.8.1.2 USAF No Action Alternative***

Under the USAF No Action Alternative, no impacts on vegetation would occur because vegetation at the project site would not be disturbed by the construction and operation of the WRF.

### **4.8.2 Wildlife**

#### ***4.8.2.1 Proposed Action Site***

With the implementation of the Proposed Action, there would be only negligible impacts on wildlife population, since no native wildlife habitat exists on the project site. Mobile species, such as birds and rabbits, would leave the site during construction and migrate to other more suitable undisturbed locations nearby on other portions of the golf course. In order to avoid impacts on ground-nesting birds, a survey for active nests or nesting activity would be conducted prior to construction if clearing and grubbing occurs during the nesting season (typically 15 March to 15 September). Therefore, the construction activities would be in compliance with the Migratory Bird Treaty Act.

#### ***4.8.2.2 USAF No Action Alternative***

Under the USAF No Action Alternative, no wildlife would be impacted, since the WRF would not be constructed and the site would not be disturbed.

### **4.8.3 Sensitive Species**

#### ***4.8.3.1 Proposed Action Site***

Under the Proposed Action, no Federally listed species would be impacted because none were observed during biological field surveys and none are known to occur in the Proposed Action

site. Burrowing owls present in the banks of Sloan Channel are found in the upper portion of the channel banks, and would not be disturbed by the addition of 20 mgd of reclaimed water discharged into the channel, since the water level in the channel would not rise to the level of the observed burrows.

#### **4.8.3.2 USAF No Action Alternative**

Under the USAF No Action Alternative, no sensitive species would be impacted because the site would not be disturbed.

### **4.9 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN**

#### **4.9.1 Proposed Action Site**

##### **4.9.1.1 Socioeconomics**

The Proposed Action Alternative would benefit socioeconomic resources in the CNLV and Clark County in both the short-term and long-term. In the short term, there would be a temporary demand for construction employees from within the existing labor pool for a period of approximately 30 months. Furthermore, supplies and materials to construct the WRF would be purchased from within the local economy. In the long term, approximately 20 persons from within the CNLV and Clark County would be employed to operate the WRF, and supplies to maintain the facility would be purchased from within the local economy.

The CNLV would also benefit monetarily from the construction of the Proposed Action. Under the Proposed Action, Clark County would be relieved of the major cost to expand existing facilities, and the need for major lift stations and force mains would be reduced or eliminated. The CNLV would not have to pay for the Clark County expansion expenses through increased wastewater treatment fees in the future. Furthermore, Sloan Channel is already lined for effluent discharge and, therefore, additional lining costs would not have to be incurred by the CNLV under the Proposed Action.

Impacts for Nellis AFB would also be beneficial in the long-term. Wastewater normally sent to Clark County Water Reclamation District would be treated at the new WRF, saving Nellis AFB approximately \$725,000 annually (CNLV 2007a). Furthermore, reclaimed water would be provided to irrigate the golf course and for other beneficial uses, at no cost to Nellis AFB.

#### **4.9.1.2 Environmental Justice**

The area around the Proposed Action site has been used for military and industrial purposes since 1941. The Nellis AFB wastewater treatment lagoons were located just north of the site from 1952 to 1972, and a landfill was adjacent to the site from 1942 to 1985 with the current residential neighborhoods present (Nellis AFB 2007b). The character of the surrounding areas has not changed substantially since that time, and there would be no changes to zoning or neighborhood character that would affect property values or socioeconomic environment in the area. The project is located in an area populated by minority and low income families, as reflected in the demographics for the entire Sunrise Manor CDP, but these families would receive similar benefits as the total population from long-term reduction in wastewater treatment costs and reduced groundwater withdrawal from the Las Vegas Valley aquifer. There would be no loss of housing as a result of the Proposed Action Alternative, nor would local residents experience any odors or risks to human health. There would be changes to the visual resources as a result of the loss of a portion of the golf course and construction and operation of the WRF. The construction and operation of the WRF would not disrupt the community structure or alter community cohesion because all of the activities would take place on existing Nellis AFB land. Environmental justice impacts would not be significant because aesthetic impacts would be minimized through specific project design features, no disproportionate human health or environmental impacts to low income or minority populations would occur, and economic benefits would be realized by all residents of Clark County, Sunrise Manor CDP and the CNLV, regardless of minority or economic status.

#### **4.9.1.3 Protection of Children**

An elementary school and a public park and playground are located near the Proposed Action site. Nearly a third of the population of Sunrise Manor CDP, and nearly half of the population of the CNLV are under the age of 18, so it is likely that children reside in many of the residences located near the project site. An advanced technology design would be used for the WRF, and there would be no emissions from the facility except reclaimed water to nearby Sloan Channel. A perimeter fence would also be installed surrounding the WRF, thereby keeping children out of the facility and protecting them from WRF operations. During construction, temporary barriers would be used to prevent accidental entry into the construction site by children and others from the public. The school is located approximately 875 feet from the Proposed Action site, and would not be impacted by construction or operation of the WRF. Short-term impacts on children would occur from construction noise near the public park and playground, but the construction-

related noise levels would be less than 75 dBA; therefore, noise levels would not be hazardous to the health of children using the public park. No long-term adverse impacts on children living near the project site or in the region of influence (ROI) are anticipated.

#### **4.9.2 USAF No Action Alternative**

Under the USAF No Action Alternative, there would be long-term adverse impacts on the CNLV and on Nellis AFB. Since a new WRF would not be constructed on Nellis AFB lands, and future costs for wastewater treatment at other facilities would substantially increase, wastewater treatment costs for Nellis AFB would increase in the future. The increased cost of constructing and operating the WRF at another location would result in increased wastewater treatment fees for the citizens of the CNLV and the surrounding communities.

### **4.10 CULTURAL RESOURCES**

#### **4.10.1 Proposed Action Site**

The Proposed Action site exists on a parcel of Nellis AFB property that has been previously surveyed for cultural resources, as documented in reports issued from 1988 to 2001, and was found to contain no cultural resources. Concurrence by Nevada SHPO has been given for the Nellis AFB cultural assessments and all requirements under the NHPA have been fulfilled (Nellis AFB 2006). Therefore, there would be no impacts on cultural resources as a result of the Proposed Action.

#### **4.10.2 USAF No Action Alternative**

Under the USAF No Action Alternative, no impacts on cultural resources would occur.

### **4.11 HAZARDOUS AND TOXIC SUBSTANCES**

#### **4.11.1 Proposed Action Site**

Since the Proposed Action site has been assessed for the presence of hazardous and toxic materials and found to contain none, there would be no disturbance of hazardous and toxic materials due to construction of the WRF (Nellis AFB 2007b). During construction of the WRF, personnel would ensure that temporary secondary containment equipment is used, where practicable, to ensure accidental releases of hazardous substances (*i.e.*, anti-freeze, petroleum, oils, and lubricants) are prevented or limited in scope. Portable catch basins, portable

containment berms, and other similar equipment would be used where feasible for refueling equipment. Personnel overseeing construction would have spill kits on site to provide expeditious response and cleanup should a spill occur. Personnel would be trained on spill notification procedures and cognizant of the Nellis AFB and state pollution prevention requirements to reduce the potential for accidental spills. No hazardous and toxic substances would be used or generated during operation of the WRF. Therefore, there would be no significant impacts on the Proposed Action site or surrounding area from hazardous and toxic substances.

#### **4.11.2 USAF No Action Alternative**

Because no soil disturbance or construction actions would take place, there would be no impacts from hazardous and toxic substances.

### **4.12 SAFETY**

#### **4.12.1 Proposed Action Site**

During construction of the WRF, all applicable OSHA rules and regulations would be followed by the CNLV, Clark County and project contractors. Heavy equipment operation areas and excavations would be secured to prevent inadvertent public access. During the term of the EUL and operation of the WRF, emergency and safety response would shift from Nellis AFB to Clark County emergency response departments. The WRF would be enclosed by secure fences and walls to prevent public access. No significant impacts on safety during construction or operation of the WRF would be expected.

#### **4.12.2 USAF No Action Alternative**

Under the USAF No Action Alternative, no changes to civilian and military safety would occur.

### **4.13 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

The EUL of the 40-acre site to the CNLV would result in a long-term commitment of Nellis AFB resources for the length of the lease, but would not constitute an irretrievable commitment of resources for Nellis AFB. Construction and operation of the WRF and any ancillary pipelines and lift stations associated with the Proposed Action would be an irretrievable commitment of various resources, including labor, capital, energy and land resources, by the CNLV.

#### 4.14 CUMULATIVE IMPACTS

A cumulative impact is defined in 40 CFR 1508.7 as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” By Memorandum dated June 24, 2005, from the Chairman of the CEQ to the Heads of Federal Agencies, entitled “Guidance on the Consideration of Past Actions in Cumulative Effects Analysis”, CEQ made clear its interpretation that “generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions”, and that the “CEQ regulations do not require agencies to catalogue or exhaustively list and analyze all individual past actions.”

Nellis AFB currently pumps wastewater to the Clark County Water Reclamation District WRF, which discharges excess reclaimed water into Las Vegas Wash. Cumulative beneficial effects to Nellis AFB would result from the Proposed Action, in that future wastewater treatment for Nellis AFB would be at a reduced negotiated cost, in exchange for the EUL of the golf course property to the CNLV for construction and operation of the WRF. Through time, reduced costs for wastewater treatment could result in savings of several million dollars in USAF utility costs.

Several recently approved construction projects are being constructed on Nellis AFB. Stormwater detention basins are being constructed in Area III, as well as additional military family housing. A solar photovoltaic power system has recently been installed in Area III to provide supplementary electric power to Nellis AFB.

Clark County and the CNLV are currently constructing or planning to construct numerous roads and road improvement projects, as well as capital improvements and public facilities, throughout the city and county over the next 3 to 5 years (Clark County 2007, CNLV 2007b). A total of approximately 75 major projects are planned for the CNLV, and 85 are planned for Clark County.

The CNLV would realize cumulative beneficial effects due to reduced wastewater treatment cost for the citizens of the city of around \$250 million over the next 25 years. Associated with the wastewater treatment cost savings is the immediate construction cost savings of \$72 million for

the CNLV due to reduced construction and land costs at the Proposed Action site (CNLV 2007a).

Over the course of the next 20 years, it is expected that the CNLV will grow, both in population and geographical size. As part of that growth, new roads would be constructed, and existing roads would be expanded and improved. It is not known exactly where growth or expansion would occur, but the new WRF would allow that growth to occur by providing expanded wastewater treatment capacity.

Cumulative beneficial impacts on the region's water quality would result from the Proposed Action, since the EUL would provide for more efficient water reclamation in the area, and would provide reclaimed water for numerous recreational and other beneficial uses in the region, thereby reducing potable water use and reducing the use of water from local aquifers. Over a 10-year period, water withdrawal by Nellis AFB for golf course irrigation would be reduced by 4.5 billion gallons.

Cumulative socioeconomic benefits would accrue as a result of the Proposed Action to all persons living in the region, regardless of income status or race, due to reduced wastewater treatment costs and the availability of reclaimed water for beneficial uses.

***SECTION 5.0***  
***REFERENCES***







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## 5.0 REFERENCES

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- Blazi, J. 2008. 99 CES/CEOF, Utilities Manager, personal communication with Lynn Haarklau, January 2008.
- Bureau of Economic Analysis. 2005. BEARFACTS: Clark County, Nevada, 1995-2005. Available online at: <http://www.bea.gov/regional/BEARFACTS/action.cfm>. Last Accessed 5 December 2007.
- California Department of Transportation (CalTrans) 1998. Technical Noise Supplement. CalTrans Environmental Program, Environmental Engineering-Noise. Air Quality and Hazardous Waste Management Office.
- Clark County 2007. Clark County Public Works 2007 Construction Projects. [www.accessclarkcounty.com/pubworks](http://www.accessclarkcounty.com/pubworks)
- CNLV 2005. City of North Las Vegas WRF Site Selection Study. Completed by Greeley and Hansen, March 2005.
- CNLV 2007a. CNLV Water Reclamation Facility, Nellis AFB Site Evaluation Study. Completed by Greeley and Hansen, May 2007.
- CNLV. 2007b. 2007 Community Report. Available online at: <http://www.cityofnorthlasvegas.com/Departments/PlanningAndZoning/PDFs/2007CommunityReport.pdf>. Last Accessed 5 December 2007.
- CNLV 2007c. City of North Las Vegas Capital Improvement Plan 2006-2010.
- Converse 2006a. Phase I Environmental Site Assessment of Approximately 21 Acres of Land Near Intersection of Losee Road and Frehner Road, North Las Vegas, Nevada.
- Converse 2006b. Phase II Environmental Site Assessment of Approximately 21 Acres of Land Near Intersection of Losee Road and Frehner Road, North Las Vegas, Nevada.
- Environmental Protection Agency (EPA) 2007. Welcome to the Green Book Non-attainment Areas for Criteria Pollutants. [www.epa.gov/oar/oaqps/greenbk](http://www.epa.gov/oar/oaqps/greenbk).
- FHWA 2007. Highway Construction Noise: Measurement, Prediction, and Mitigation. Federal Highway Administration. <http://www.fhwa.dot.gov/environment/noise/highway/hcn06.htm>. Last accessed December 5, 2007.
- Las Vegas Valley Water District 2008. [http://www.lvwd.com/groundwater\\_index.html](http://www.lvwd.com/groundwater_index.html).
- Midwest Research Institute, (MRI) 1996. Improvement of Specific Emission Factors (BACM Project No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract 95040, Diamond Bar, CA. March 1996.
- Nellis AFB 2006. Integrated Cultural Resources Management Plan *Final Draft*. Nellis Air Force Base, August 2006.

- Nellis AFB, 2007a. Draft Integrated Natural Resources Management Plan, Nellis Air Force Base/Nellis Air Force Range. 99th Civil Engineering Squadron, Environmental Management Flight, May 2007.
- Nellis AFB 2007b. Phase I Environmental Baseline Survey for the Enhanced Use Lease of Nellis AFB Land to the City of North Las Vegas for Construction of a Wastewater Treatment Facility.
- Nellis AFB 2007c. Draft Future Land Use and Facility Siting Guide. Nellis AFB 2007.
- Nevada Department of Environmental Protection (NDEP). 2004. Nevada Air Quality Standards Website. <http://ndep.nv.gov/baqp/baqpollu.html>. Last accessed December 2006.
- NDEP 2007. No Further Action Determination-Water Reclamation Facility, City of North Las Vegas, Losee and Frehner Road.
- Nevada Natural Heritage Program 2007. <http://www.heritage.nv.gov/spelists.htm>.
- RECLAMATION 2007. Final North Las Vegas Water Reclamation Facility Environmental Assessment and FONSI, U.S. Department of Interior, Bureau of Reclamation.
- UNLV (University of Nevada Las Vegas) 2003. *Las Vegas Valley Seismic Response Project*. Information available online at: <http://geoscience.unlv.edu/pub/snelson/LVSRP/>.
- U.S. Census Bureau (USCB). 2004. Small Income and Poverty Estimates. Available online: <http://www.census.gov/cgi-bin/saipe>. Last Accessed 5 December 2007.
- USCB. 2006a. Clark County, Nevada Quickfacts. Available online at: <http://quickfacts.census.gov/qfd/states/32/32003.html>. Last Accessed 5 December 2007.
- USCB. 2006b. Fact Sheet – North Las Vegas City, Nevada. Available online at: [http://factfinder.census.gov/servlet/ACSSAFFacts?\\_event=Search&geo\\_id=&\\_geoContext=&\\_street=&\\_county=north+las+vegas&\\_cityTown=north+las+vegas&\\_state=04000US32&\\_zip=&\\_lang=en&\\_sse=on&pctxt=fph&pgsl=010](http://factfinder.census.gov/servlet/ACSSAFFacts?_event=Search&geo_id=&_geoContext=&_street=&_county=north+las+vegas&_cityTown=north+las+vegas&_state=04000US32&_zip=&_lang=en&_sse=on&pctxt=fph&pgsl=010). Last Accessed 5 December 2007.
- USCB. 2006c. Elk Grove, Calif., Named Fastest-Growing City. Available online at: <http://www.census.gov/Press-Release/www/releases/archives/population/007001.html>. Last Accessed 5 December 2007.
- USCB. 2007. Census Bureau Announces Most Populous Cities. Available online at: <http://www.census.gov/Press-Release/www/releases/archives/population/010315.html>. Last Accessed 5 December 2007.
- U.S. Fish and Wildlife Service (USFWS). 2005. Nevada's Endangered, Threatened, Proposed and Candidate Species by County. Updated March 7, 2005.

***SECTION 6.0***  
***LIST OF PREPARERS***





## 6.0 LIST OF PREPARERS

*The following people were primarily responsible for preparing this Environmental Assessment.*

Name	Agency/Organization	Discipline/Expertise	Experience	Role In Preparing EA
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Sarah Viernum	Gulf South Research Corporation	Ecology	1 year environmental studies	Federal listed species
Stephen Oivanki	Gulf South Research Corporation	Geology	21 years environmental planning studies	Project Manager
John Lindemuth	Gulf South Research Corporation	Cultural Resources	12 years experience in cultural resources studies	Cultural resources evaluation
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	31 years EA/EIS studies	QA/QC
Chris Cothron	Gulf South Research Corporation	GIS/Graphics	1 year GIS analysis	GIS and graphics
Steve Kolian	Gulf South Research Corporation	Water/Air Quality/Noise	10 years environmental planning studies	Water, air quality, noise

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*APPENDIX A*  
*2007 BUREAU OF RECLAMATION EA AND FONSI*







**FINDING OF NO SIGNIFICANT IMPACT  
(FONSI)  
LC-07-041-FONSI**

**The North Las Vegas  
Water Reclamation Facility  
Clark County, Nevada**

Based on a thorough review of the comments received and analysis of the environmental impacts presented in the attached Final Environmental Assessment (EA), Reclamation concludes that implementation of the proposed action will not significantly affect the quality of the human and biological environment within the project area, so far as corrective actions addressed by the Nevada Division of Environmental Protection (NDEP) are completed.

The City of North Las Vegas must follow State of Nevada requirements for cleanup of the property as spelled out in Spill Report No. 070206-04 for NDEP Site ID# H-000558.

This Finding of No Significant Impact has, therefore, been prepared and is submitted to document environmental review and evaluation of the proposed action in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Prepared: Richard C. Murphy Date: 9-13-2007  
Natural Resource Specialist

Recommended: [Signature] Date: 9-13-07  
Manager, Environmental Compliance Group

Approved: [Signature] Date: 9-13-07  
Director, Resources Management Office



# FINAL

## NORTH LAS VEGAS WATER RECLAMATION FACILITY ENVIRONMENTAL ASSESSMENT



Prepared for:  
U.S. Department of the Interior  
Bureau of Reclamation  
Lower Colorado River Regional Office  
Boulder City, Nevada

On Behalf of  
City of North Las Vegas  
2829 Fort Sumter Drive  
North Las Vegas, Nevada 89030

Prepared by:



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November 2006

## **ACRONYMS AND ABBREVIATIONS**

BMPs	Best Management Practices
CCDAQM	Clark County Department of Air Quality Management
CCWRD	Clark County Water Reclamation District
CFR	Code of Federal Regulations
CLV	City of Las Vegas
CNLV	City of North Las Vegas
EA	Environmental Assessment
mgd	million gallons per day
NEPA	National Environmental Policy Act
Reclamation	Bureau of Reclamation
UPRR	Union Pacific Railroad
USC	United States Code
USGS	U.S. Geologic Survey
WQMP	Water Quality Management Plan

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 Purpose and Need for Action.....	1
1.1 Introduction.....	1
1.2 Purpose and Need .....	1
1.3 Objectives of the Action .....	2
1.4 Project Description.....	2
1.5 Scoping .....	4
1.6 Authorizing Actions and Relationships to Plans and Policies.....	4
1.6.1 Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of Public Law 102-575, as amended) .....	4
1.6.2 National Environmental Policy Act.....	4
1.6.3 Clean Water Act.....	4
1.6.4 Clean Air Act.....	5
1.6.5 The National Historic Preservation Act.....	5
1.6.6 Nevada Revised Statute 244 .....	5
1.7 Related Documents .....	5
1.8 Agencies that May Use This Environmental Assessment and for What Purposes.....	5
2.0 Alternatives Including the Proposed Action .....	7
2.1 Development of Alternatives .....	7
2.2 Alternatives Considered and Eliminated from Detailed Consideration.....	7
2.3 No-Action Alternative .....	8
2.4 Action Alternative.....	9
3.0 Affected Environment, Environmental Consequences, and Mitigation Options.....	10
3.1 Resources Considered and Eliminated from Detailed Consideration.....	10
3.1.1 Paleontological Resources .....	10
3.1.2 Farmlands.....	10
3.1.3 Wilderness .....	10
3.1.4 Floodplain .....	11
3.1.5 Groundwater .....	12
3.1.6 Wild and Scenic Rivers.....	12
3.1.7 Fire Management .....	12
3.1.8 Access and Transportation.....	12
3.1.9 Land Use and Recreation.....	12
3.1.10 Biological Resources .....	12
3.1.11 Cultural Resources .....	13
3.1.12 Native American Religious Concerns.....	13
3.1.13 Indian Trust Assets .....	13
3.1.14 Soundscape .....	13
3.1.15 Visual Resources.....	14
3.1.16 Odor .....	14
3.2 Affected Environment, Environmental Consequences, and Mitigation .....	14
3.2.1 Geology, Seismicity, and Soils.....	14

3.2.1.1	Affected Environment .....	14
3.2.1.2	Environmental Consequences.....	15
3.2.1.2.1	Alternative 1–Mitigation Options .....	15
3.2.1.2.2	No Action–Mitigation Options .....	15
3.2.2	Surface Water, Stormwater, and Jurisdictional Waters .....	15
3.2.2.1	Affected Environment .....	15
3.2.2.2	Environmental Consequences.....	15
3.2.2.2.1	Alternative 1–Mitigation Options .....	16
3.2.2.2.2	No Action–Mitigation Options .....	16
3.2.3	Air Quality .....	16
3.2.3.1	Affected Environment .....	16
3.2.3.2	Environmental Consequences.....	16
3.2.3.2.1	Alternative 1–Mitigation Options .....	16
3.2.3.2.2	No Action–Mitigation Options .....	17
3.2.4	Hazardous Waste .....	17
3.2.4.1	Affected Environment .....	17
3.2.4.2	Environmental Consequences.....	17
3.2.4.2.1	Alternative 1–Mitigation Options .....	17
3.2.4.2.2	No Action–Mitigation Options .....	18
3.2.5	Environmental Justice.....	18
3.2.5.1	Environmental Justice Affected Environment.....	18
3.2.5.2	Environmental Justice Environmental Consequences .....	19
3.2.5.2.1	Alternative 1–Mitigation Options .....	19
3.2.5.2.2	No Action–Mitigation Options .....	19
3.2.6	Socioeconomic Conditions .....	19
3.2.6.1	Socioeconomic Conditions Affected Environment .....	19
3.2.6.1.1	Demographic Characteristics .....	19
3.2.6.1.2	Employment and Income .....	19
3.2.6.2	Socioeconomic Conditions Environmental Consequences .....	20
3.2.6.2.1	Alternative 1–Mitigation Options .....	20
3.2.6.2.2	No Action–Mitigation Options .....	20
3.3	Cumulative Impacts .....	20
3.3.1	Past, Present, and Reasonably Anticipated Future Projects.....	20
4.0	Other Analyses.....	22
4.1	Relationship Between Short-Term Uses and Long-Term Productivity.....	22
4.1.1	Short-Term Uses of Man’s Environment.....	22
4.1.2	Long-Term Effects of the Proposed Project .....	22
4.2	Irretrievable Commitments of Resources .....	22
4.2.1	Irreversible and Irretrievable Commitment of Resources.....	22
5.0	Environmental Commitments (Mitigation plan).....	24
6.0	Consultation and Coordination .....	26
6.1	Public Meetings .....	26
6.2	City Council Meetings .....	26
6.3	Agency Scoping Meeting.....	26

7.0 Preparers and Contributors .....	27
8.0 References.....	28

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 3-1. Potentially Impacted Resources .....	11
Table 3-3. Hazardous Materials Mitigation Measures.....	18
Table 3-4. Analysis of Cumulative Effects.....	21
Table 4-1. Irreversible and Irretrievable Commitment of Resources .....	23
Table 5-1. Environmental Commitments (Mitigation Plan) for the Proposed Water Reclamation Facility .....	25

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 1-1. North Las Vegas Water Reclamation Facility Project Area Location .....	2

## ENVIRONMENTAL ASSESSMENT ORGANIZATION

This EA is presented in eight main sections as follows:

- Chapter 1 describes the purpose and need for the project.
- Chapter 2 contains a description of the action alternative, the no-action alternative, and a summary of alternatives that were eliminated from detailed consideration because they did not meet the purpose and need, and the reasons they were not evaluated in detail.
- Chapter 3 describes the affected environment, environmental consequences, and mitigation measures.
- Chapter 4 provides an analysis of short-term uses and long-term productivity and describes irreversible and irretrievable commitments of resources.
- Chapter 5 presents a concise summary of environmental commitments (mitigation plan).
- Chapter 6 describes consultation and coordination activities and processes.
- Chapter 7 presents the references used in compiling the document.
- Chapter 8 includes a list of preparers and contributors.



## 1.0 PURPOSE AND NEED FOR ACTION

### 1.1 Introduction

Located adjacent to Las Vegas, Nevada, the City of North Las Vegas (CNLV) is one of the fastest growing cities in the southwestern United States. It is located in the north and northeastern portions of the Las Vegas Valley. The current population is 194,464; population projections indicate growth to 500,000 by the year 2030.

The Reclamation Wastewater and Groundwater Study and Facilities Act of 1992, referred to as Title XVI of Public Law 102-575, directs the Secretary of the Interior (Secretary), acting pursuant to the Reclamation Act of 1902, as amended, to undertake a program to investigate and identify opportunities for water reclamation and reuse. The Act authorized Reclamation to participate in the construction of five recycling projects, four of which received Federal construction funding. In 1996, Congress enacted the Reclamation Recycling and Water Conservation Act (Public Law 104-266) which amended Title XVI and authorized Reclamation to participate in an additional 18 projects, including two research and development projects. In addition, Congress specified prerequisites that must be met before construction funds can be appropriated for a project. These prerequisites are:

1. Reclamation or the non-Federal project sponsor has completed a feasibility study that complies with the provisions of the Act;
2. The Secretary has determined that the non-Federal sponsor is financially capable of funding the non-Federal share of the project costs; and
3. The Secretary has approved a cost-sharing agreement with the project sponsor. In addition, Reclamation must ensure completion of appropriate environmental compliance under NEPA during the feasibility stage before construction funding can be disbursed (<http://www.usbr.gov/pmts/writing/guidelines/Guidelines.pdf>).

Pursuant to Title XVI, the CNLV has secured a grant from the Bureau of Reclamation (Reclamation) and will provide additional funds to build a Water Reclamation Facility. CNLV has conducted a Site Selection Study, obtained County Commission approval for a Water Quality Plan, and has initiated a comprehensive public involvement program to describe the proposed Water Reclamation Facility to the public (CNLV 2005a).

### 1.2 Purpose and Need

The need for wastewater treatment facilities to serve the CNLV is growing as the entire region continues to experience population growth. Currently, wastewater generated in the CNLV is conveyed to adjoining facilities with the City of Las Vegas (CLV) or to the Clark County Water Reclamation District (CCWRD) for treatment and disposal.

Approximately 18 million gallons per day (mgd) of wastewater is currently generated within the CNLV, of which 15 mgd is sent to CLV and 3 mgd is sent to CCWRD. A study conducted by CNLV in October 2004 estimated future growth in CNLV would generate approximately 50 mgd of wastewater. This study recommended that CNLV control future costs associated with wastewater collection, treatment, and disposal through construction and operation of their own Water Reclamation Facility (Greeley and Hansen 2005:ES-1). The purpose of this action would be to save the CNLV and its residents \$249,393,728 by the year 2030 (CNLV 2005b).

### **1.3 Objectives of the Action**

The action alternative presented in this Environmental Assessment (EA) is an economically feasible option for development of the proposed Water Reclamation Facility. The objective of the action is to provide a facility to treat wastewater for businesses and residents of North Las Vegas.

### **1.4 Project Description**

This EA provides an analysis of the potential environmental impacts related to the construction, operation, and continuing use of the CNLV Water Reclamation Facility. This facility would be located on a 20-acre site between Frehner Road and the Union Pacific Railroad (UPRR) right-of-way, near Losee Road and Craig Road in the CNLV, Clark County, Nevada. The proposed project area is located on the U.S. Geological Survey map as southwest 1/4 of Section 1, Township 20 South, Range 61 East, and in the northwest 1/8 of Section 12, Township 20 South, Range 61 East (Figure 1-1). The wastewater treatment plant would include a 6,000 square foot administration building, a 4,000 square foot maintenance building and several ancillary buildings (four 1,000-square foot buildings).

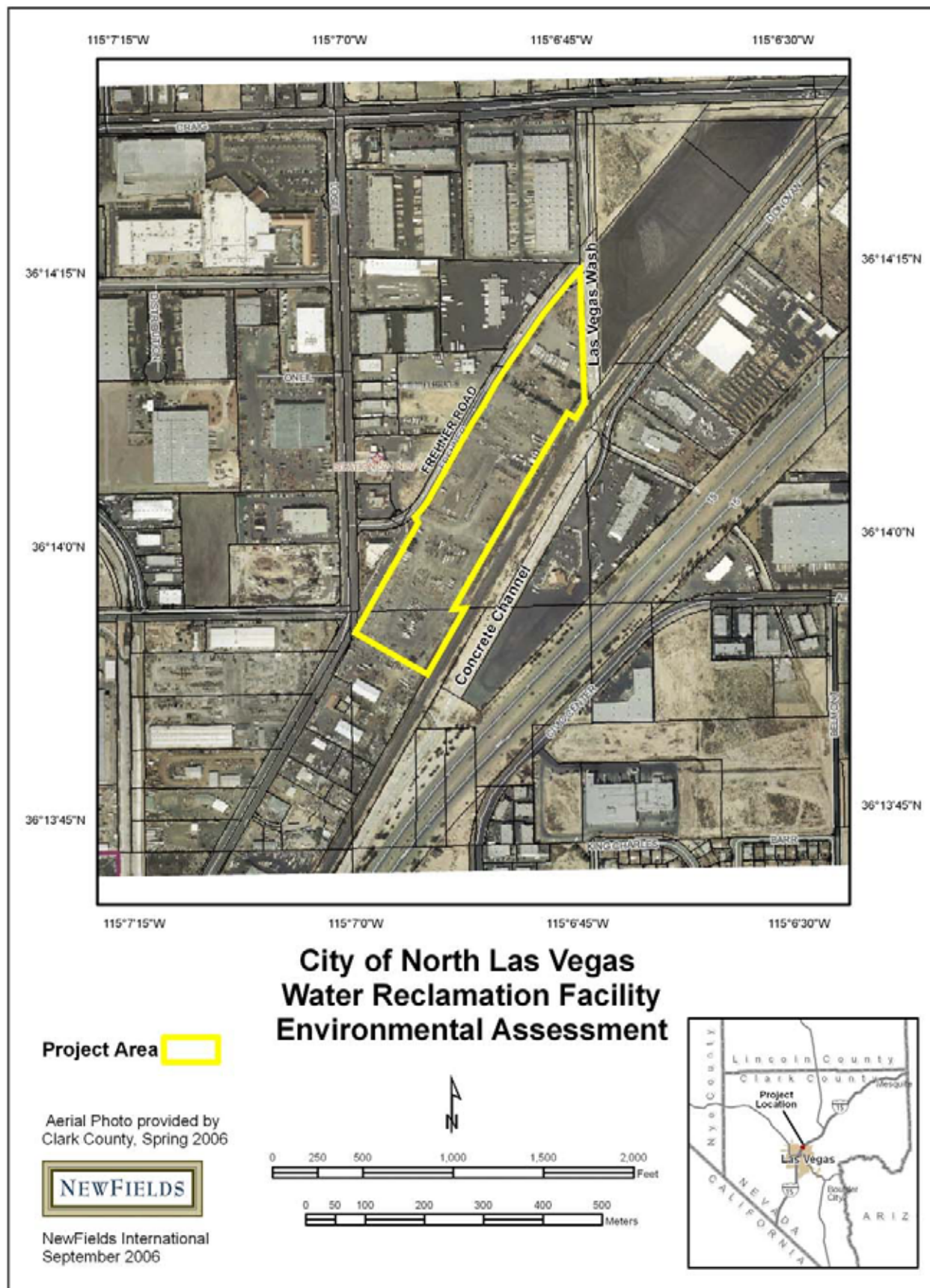


Figure 1-1. City of North Las Vegas Water Reclamation Facility Project Area Location

These buildings would be less than 20 feet high, constructed of concrete block, and painted to match their surroundings. The process structure would be partially underground and extend aboveground less than six feet. It would include the following wastewater treatment components:

- Screening and grit removal
- Primary clarification
- Membrane biological reactors
- Disinfection

Open ponds will not be part of the facility. All processes and holding basins would be covered and include advanced filtration processes designed to eliminate odors. Extensive landscaping around the facility would help to hide the facility and beautify the neighborhood.

## **1.5 Scoping**

Nine alternative treatment plant locations were evaluated by the CNLV (Greeley and Hansen 2005). These are described in more detail in Chapter 2. An agency and contractor scoping meeting was held on March 1, 2006, to determine the issues and resources of concern for a tentative location. This location was subsequently found unsuitable and a second agency scoping meeting was held on August 17, 2006, to determine the issues and resources of concern for the location considered in this EA (Figure 1-1). Chapter 6 of this document contains more information on the scoping and coordination and consultation process.

## **1.6 Authorizing Actions and Relationships to Plans and Policies**

The following major laws, regulations, and other guidance may apply to implementation of this proposed project.

### **1.6.1 Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of Public Law 102-575, as amended)**

The CNLV requested and received a portion of the funding for this project from Reclamation pursuant to Title XVI of the Reclamation Wastewater and Groundwater Study and Facilities Act. Therefore, construction of the proposed facility is considered a federal undertaking and environmental and cultural resources compliance is necessary.

### **1.6.2 National Environmental Policy Act**

The following analysis was conducted pursuant to the requirements of the National Environmental Policy Act (NEPA) of 1970, as amended (40 CFR. 1500 et seq.) and its implementing regulations issued by the Council on Environmental Quality. As part of the NEPA analysis, consideration of laws regarding biological and cultural resources, air quality, water quality, and the use and disposal of hazardous materials is required

### **1.6.3 Clean Water Act**

The Clean Water Act, as amended (33 U.S.C. 1251 et seq.) establishes federal limits through the National Pollution Discharge Elimination System on the amounts of specific pollutants that are discharged to surface waters in order to restore and maintain the chemical, physical, and biological integrity of the law. A National Pollution Discharge Elimination System permit is required for the discharge of point sources such as pipes or ditches into waters of the United

States. This Act also mandates regulatory requirements for a permit system under Section 404 to place fill material into waters of the United States.

#### **1.6.4 Clean Air Act**

The Clean Air Act, as amended (42 U.S.C. 7401 et seq.) establishes federal policy to protect and enhance the quality of the Nation's air resources to protect human health and the environment. The Clean Air Act sets national primary and secondary ambient air quality standards as a framework for air pollution control.

#### **1.6.5 The National Historic Preservation Act**

Pursuant to the National Historic Preservation Act, federal agencies must consider the effects of an undertaking on historic properties. An undertaking is defined as the "type" of activity that has the potential to effect properties, if present. Because a portion of the funding for the water reclamation facility is supplied by a federal entity, construction of the facility is a federal undertaking and compliance with the Act is necessary.

#### **1.6.6 Nevada Revised Statute 244**

Nevada Revised Statute 244A.571 designates Clark County as the agency responsible for area-wide waste management planning. This Act set up a Technical Advisory Committee (the Sewage Wastewater Advisory Committee) comprised of representatives from the municipalities and/or districts that are engaged in the operation of management of wastewater treatment facilities or water distribution facilities in Clark County. The Sewage and Wastewater Advisory Committee includes representatives from the following entities:

- Clark County
- CCWRD
- CLV
- CNLV
- City of Henderson
- City of Boulder City
- City of Mesquite
- Las Vegas Valley Water District
- Moapa Valley Water District
- Virgin Valley Water District

### **1.7 Related Documents**

Previous studies relating to the development of the Water Reclamation Facility in the CNLV include a Phase I Environmental Site Assessment (Terracon 2001), and a Site Selection Study (Greeley and Hansen 2005). An Economic Feasibility Study was also conducted (CNLV 2004).

### **1.8 Agencies that May Use This Environmental Assessment and for What Purposes**

This EA was prepared in compliance with NEPA requirements to identify and disclose the potential environmental consequences to agency decision makers. Reclamation is the lead federal agency and the CNLV is the project proponent. Reclamation and the CNLV will review the Draft

EA, consider input from the public and other agencies, provide comments, and review the Final EA. Reclamation will make a determination of the potential significance of the impacts. If it is determined the project is eligible for a Finding of No Significant Impact Reclamation could then issue right of way grants or permits. However, if it is determined the potential for impacts, after mitigation, were potentially significant, Reclamation could require additional analysis.

## 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

### 2.1 Development of Alternatives

The alternatives presented in this EA are the result of a long-term planning process. As described in Section 1.0, alternative locations were developed as part of a process beginning in 2004. Greeley and Hansen (2005) analyzed nine alternative site locations, and Terracon completed a Phase I Environmental Assessment of one location (2001). These analyses led to the Action Alternative presented in this EA.

The final location option presented in this EA resulted from Town Meetings held for the residents of the CNLV. These meetings provided forums for residents to voice their concerns and obtain information about project specifics that could affect their neighborhoods. Town Meetings were held on: November 3, 2005 and June 8, 2006. A public hearing was held on October 4, 2005. Special City Council Meetings held on October 20, 2004 and March 16, 2005, explored site selection and economic feasibility considerations regarding the proposed locations.

### 2.2 Alternatives Considered and Eliminated from Detailed Consideration

Alternatives considered for the proposed Water Reclamation Facility include evaluation of nine potential site locations in the region south of Craig Road, west of Marion Avenue, and north of Carey Avenue in the CNLV and unincorporated Clark County. Some of these locations presented socioeconomic problems, others were deemed not to be economically feasible, and others were considered technically unfeasible. The advantages and disadvantages of these locations are listed below:

**Site 1 (Northwest Corner of Alexander Road at Arcata Way):** Advantages to this site are that most wastewater flows can be conveyed to the site by gravity, excess reclaimed water can be discharged in the adjacent storm channel, the site is buffered by industrial areas on the south and east, the site is clean and flat, the site has significant vacant land for staging during construction and future construction, and the site has no known environmental issues. The disadvantage of this site is it would require two lift stations to capture the wastewater flows.

**Site 2 (Gowan Road at Bruce Street):** Advantages to this site are that the surrounding parcels are zoned General Industrial, the parcel is not in a 100-year flood zone, and that a railroad spur is located north of the site that could be used to transport processed solids or chemicals.

**Site 3 (Colton Avenue and Bruce Street):** The advantage to this site is the surrounding parcels are zoned General Industrial. Disadvantages include the site is highly subdivided (with a total of eight different owners) and the lot has significant grade changes from east to west across the property.

**Site 4 (Brooks Avenue Golf Course):** Advantages include all of the land is zoned General Industrial and it is not in the 100-year flood zone. Disadvantages include the land is currently in use as a public golf course and sits on an old landfill site. Also, there are storage tanks to the north and southwest of the property and substantial grade changes would mean significant cut and fill work to construct the Water Reclamation Facility.

**Site 5 (Pecos Road and Gowan Road):** Advantages are that the land is currently vacant, is not in the 100-year flood zone, and is zoned General Industrial. Disadvantages are that some adjacent land is zoned single-family residential.

**Site 6 (Bay Lake Trail and Kier Road):** Advantages to this parcel are that it is zoned General Industrial. A disadvantage is that a drainage channel runs through the western side of the parcel, placing it in the 100-year flood zone.

**Site 7 (northwest corner of Pecos Road at Cheyenne Avenue):** This site is the current CNLV North Las Vegas Cheyenne Sports Complex. Advantages include no need for a new lift station, buffered by major roads, not in a flood zone, site is clean and flat, large land area, no known environmental issues, site is in Nellis flight path and proposed use is compatible with land use requirements, no sewer capacity issues, and zoned Industrial. A disadvantage to this site is that residential neighborhoods are on the south, east, and north of this property. If this site were selected, another site for the sports complex would need to be found.

**Site 8 (southeast corner of Cheyenne Avenue at Lamb Boulevard):** The site has all the advantages and disadvantages of Site 7. A disadvantage is a lengthy pipe would be required to discharge reclaimed water to Las Vegas Wash.

**Site 9: (northeast corner of Carey Avenue at Lamb Boulevard):** This site is at the southeast corner of Site 8 and has all the advantages and disadvantages described for that site. In addition, the site is adjacent to residential homes on the east side.

From these nine alternative locations, Greeley and Hansen recommended four sites as the “best potential sites” for locating the Water Treatment Facility based on technical, financial, institutional, and other criteria. These were Site 1, Site 7, Site 8, and Site 9. Most of these sites would allow wastewater to be fed to them via gravity, eliminating the need for lift stations, and they had no drainage issues and were relatively level and clean. They had no substantive environmental issues based on preliminary investigations (Greeley and Hansen 2005:ES-2).

**Final Site Selection:** None of the four sites considered advantageous because of their locations and topography proved desirable when other factors were considered. Site 1 was not chosen because two new lift stations would be necessary to convey the wastewater flows to it. This would require additional land purchases by the CNLV. Site 7 had homes located on the south, east and north boundaries, and was already slated for a Sports Complex. Local residents did not support the use of this location. Sites 8 and 9 were not within the CNLV and required agreement from Clark County to utilize them. Such agreement was not forthcoming. Adjacent homes on the east boundary of Site 9 made that location unattractive to residents of the area. Therefore, none of these sites were chosen as the final location for the water reclamation facility.

**Frehner and Losee Location:** In June 2006, the Council approved the purchase of 20 acres near Frehner and Losee Roads for the Water Reclamation Facility. This location was not previously evaluated but was advantageous because of its zoning, physical characteristics, and proximity to the UPRR. This is the location for the Action Alternative considered in this EA.

## 2.3 No-Action Alternative

NEPA requires that a No-Action Alternative be considered (40 CFR 1502.14(d)). Under the No-Action Alternative, the proposed Water Reclamation Facility would not be constructed and the residents of the CNLV would face increasing rates as wastewater continued to be processed by the CLV and the CCWRD.



## **2.4 Action Alternative**

The Action Alternative focuses on development of a facility at the Frehner and Losee Road site (Figure 1-1). The advantages of this site are: it is zoned for commercial use so no residential development would be impacted, it is relatively flat so construction grading would be limited, it is adjacent to the UPRR facilitating shipment of raw materials, and it is located adjacent to Las Vegas Wash so the treated water could be easily conveyed. One disadvantage is that the site has been the site of petroleum storage facilities and clean up of spills may be necessary.

As discussed above in Section 2.2, no other locations are considered because previous studies, CNLV Council Meetings, and Public Meetings found them unsuitable for socioeconomic, economic, and technical reasons.

### **3.0 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION OPTIONS**

The Affected Environment is the baseline describing the existing conditions of each resource examined. This section identifies and evaluates the natural and physical resources and the relationship of people with those resources. Data used to define the baseline was obtained from existing sources and from field investigations.

#### **3.1 Resources Considered and Eliminated from Detailed Consideration**

The Council on Environmental Quality regulations (40 CFR 1501.7(a)(3)) specifically requires that environmental documents:

Identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.

In compliance with that directive, an agency scoping meeting was held on August 17, 2006, and issues were separated into substantive and non-substantive groups (Table 3-1). Substantive issues were defined as those with impacts to resources directly or indirectly caused by implementing the proposed action. An issue or resource would be considered non-substantive if it was: (1) outside the scope of the proposed action; (2) already decided by law, regulation, another NEPA document, or other higher level decision; (3) irrelevant to the decision to be made; or (4) conjectural and not supported by scientific or factual evidence.

In compliance with 40 CFR 1501.7(a)(3)), Table 3-1 lists the resources that were eliminated from detailed evaluation and those analyzed in detail. The following text provides justification for those resources not considered in detail.

##### **3.1.1 Paleontological Resources**

This resource was not considered in detail because the proposed project is located in an area of low paleontological potential. Additionally, the site has been previously developed and no paleontological resources were present; therefore, no further investigation is required.

##### **3.1.2 Farmlands**

This resource was not considered in detail because effects would be irrelevant to the decision. No farmlands occur within or near the project area; therefore, no further investigation is required.

##### **3.1.3 Wilderness**

This resource was not evaluated in detail because effects would be irrelevant to the decision made. No wilderness occurs within or near the proposed project area; therefore, no further investigation is required.

**Table 3-1. Potentially Impacted Resources**

Identified Resource	Substantive Potential Impact Identified	
	Yes	No
Geology, Seismicity, Soils, and Mining	X	–
Paleontological Resources	–	X
Farmlands	–	X
Wilderness	–	X
Floodplain	–	X
Groundwater	–	X
Surface Water and Jurisdictional Waters	X	–
Wild and Scenic Rivers	–	X
Air Quality	X	–
Hazardous Waste	X	–
Fire Management	–	X
Access and Transportation	–	X
Land Use and Recreation	–	X
Biological Resources	–	X
Cultural Resources	–	X
Environmental Justice	X	–
Public Health and Safety	–	X
Socioeconomic	X	–
Indian Trust Assets	–	X
Native American Religious Concerns	–	X
Soundscape	–	X
Visual Resources	–	X
Odor	–	X

### 3.1.4 Floodplain

The proposed project area was previously developed and is in compliance with the CCRFCD master plan update. The Las Vegas Wash runs along the eastern border of the proposed project area, and a concrete flood channel runs along the eastern edge. These channels will remain in place to handle storm water. Therefore, no further investigation of this topic is required. A Water Quality Management Plan (WQMP) was developed, which would be used to define what actions

to take to preserve drainage patterns. Such a plan would include methods to protect surface water from pollutants that might be generated during construction. Additionally the CNLV and Clark County review of a drainage study and grading plan are designed to prevent stormwater problems.

### **3.1.5 Groundwater**

This resource was not evaluated in detail because effects would be irrelevant to the decision made. A Phase I Environmental Site Assessment report was consulted and found that the groundwater level is approximately 55 feet below the ground surface. Proposed construction activities will not alter the groundwater level or flow. Best Management Practices (BMPs) would be used to define what actions to take if shallow groundwater is encountered during construction. Such a plan would include methods to protect groundwater from pollutants that might be generated during construction.

### **3.1.6 Wild and Scenic Rivers**

This resource was not evaluated in detail because effects would be irrelevant to the decision made. No wild and scenic rivers occur within or near the proposed project area; therefore, no further investigation is required.

### **3.1.7 Fire Management**

Detailed consideration of fire management practices was not deemed necessary in this EA because contractor safety practices such as providing vehicle fire extinguishers would address potential fire hazards during construction. Fire suppression sprinklers and smoke alarms installed in compliance with local building codes would address post-construction fire risk.

### **3.1.8 Access and Transportation**

During construction, increased traffic may cause short-term delays as construction vehicles enter and exit the project area. However, most of the construction would take place away from the main travel corridors. This incremental increase in project-related traffic is not anticipated to change the current level of service. After construction, the relatively small amount of traffic associated with the proposed Water Reclamation Facility is not expected to affect the existing interstate access or transportation routes into the area.

### **3.1.9 Land Use and Recreation**

Detailed consideration of land use and recreation was not deemed necessary in this EA because the project would be developed in an industrial area and is considered a compatible use of the land.

### **3.1.10 Biological Resources**

Detailed consideration of biological resources was not deemed necessary in this EA. Project area maps, photographs, and site visits confirmed that the project area was previously developed as an industrial area and no biological resources occur within or near the proposed project area.

### **3.1.11 Cultural Resources**

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires that federal agencies take into account the effects of their actions on historic properties—that is, places included in or eligible for listing on the National Register of Historic Places (NRHP)(36 CFR 800). The NRHP eligibility criteria stipulate that sites must be assessed for integrity of location, design, setting, materials, workmanship, feeling and association. A site may be considered eligible for the NRHP if it retains sufficient integrity of the elements above and if it: a) is associated with events that have made a significant contribution to the broad patterns of our history, b) is associated with the lives of persons significant in our past, c) embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction, or d) it yields, or may be likely to yield, information important in prehistory or history (36 CFR 0.4)(NPS 1997).

The archaeological evidence suggests utilization of the Las Vegas Valley by native peoples from approximately 13,000 years ago to the present. Food foraging people probably utilized the valley throughout this time, while people such as the Virgin Anasazi and the Patayan made use of the valley resources during much later timeframes. Southern Paiute occupied the valley when the first Euro-Americans and other ethnic groups entered the valley in the mid 1800s. Historic use of the valley focused on ranching, mining, and the development of transportation corridors. While there is considerable evidence for utilization of portions of the Las Vegas Wash, a Class I literature review conducted at the Harry Reid Center for Environmental Studies indicated that no archaeological sites are located along the wash within the project area. In addition, the entire area has been graded and otherwise modified such that any sites that once existed have been destroyed. No cultural resources occur within or near the proposed project area.

### **3.1.12 Native American Religious Concerns**

No known sacred sites or areas of Native American concern are within or near the project area.

### **3.1.13 Indian Trust Assets**

Indian Trust Assets are legal interests in property held in trust by the United States for Federally recognized Indian Tribes or individual Indians, or property of the United States requiring protection by law. Examples of resources that are Indian Trust Assets include lands, minerals, hunting and fishing rights, and water rights. Department of the Interior Order 3175 requires that (1) agencies consult with Indian tribes when trust property may be affected; and (2) environmental and planning documents should “clearly state the rationale for the recommended decision will be consistent with the Department’s trust responsibilities.” No known Indian Trust Assets are present in or near the proposed project area.

### **3.1.14 Soundscape**

Detailed consideration of the soundscape was not deemed necessary in this EA. Because the proposed Water Reclamation Facility is located in an industrial area and is designed to operate very quietly, there would be no impacts to the surrounding businesses.

### **3.1.15 Visual Resources**

Because the North Las Vegas Water Reclamation Facility would be located in an existing industrial area, no noticeable changes to the visual character of the region are anticipated. Therefore, visual resources were not analyzed in detail.

### **3.1.16 Odor**

Odor is briefly considered here because of the public perception that the proposed action may produce offensive odors. However, because the entire facility would be covered and advanced air filtration would be installed, it is anticipated that no discernible odor would emanate from the facility. Therefore, this issue was not considered in detail.

## **3.2 Affected Environment, Environmental Consequences, and Mitigation**

The following sections define baseline conditions (Affected Environment) and environmental consequences for those resources that may potentially be impacted by the proposed Water Reclamation Facility.

### **3.2.1 Geology, Seismicity, and Soils**

This section summarizes potential geologic and soil hazards or constraints on the proposed facility. This information was obtained from published sources and the U.S. Geologic Survey (USGS) Earthquake Hazards database.

#### **3.2.1.1 Affected Environment**

The project area is within the Las Vegas Valley, a prominent topographical depression trending northwest across Clark County. It is a broad sedimentary basin composed primarily of Quaternary alluvial deposits (UNLV 2003). The valley is geographically bounded by the Spring Mountains to the west, Frenchman Mountain to the east, the McCullough Range to the south, and the Sheep and Las Vegas ranges to the north.

The valley marks a zone of deformation separating the Spring Mountains from the northern ranges. Longwell et al. indicate that south of the valley the structural continuity of elements that cross the Spring Mountains change from north trending to northeast trending. This bending of the structural elements indicates a tectonic zone along which right-lateral movement has occurred (Longwell et al. 1965:62). The so-called Las Vegas Shear Zone is made up of inactive Miocene strike-slip faults and active Quaternary normal faults (UNLV 2003).

The Las Vegas area is characterized by infrequent earthquakes of relatively low magnitude; three main areas of faulting have been documented in the Las Vegas area (Terracon 2001:4). The nearest fault zone is 1.83 miles from the proposed facility, and the nearest bedrock fault is 5.36 miles from the proposed facility (CCRFGD 2004). These and other potentially active faults found in the project area could create potentially strong ground motion. However, while many faults are known for the area, few actual earthquakes with epicenters in extreme Southern Nevada have been recorded. The Las Vegas area lies within seismic zone 2B, according to the Seismic Zone Map of the United States (USGS 2002)

The predominate soil type found in the project area is Las Vegas-McCarran, which has a gravelly fine sandy loam texture. The slope of the proposed project area is 0 to 4 percent, which results in a low erosion potential (CCRFGD 2004). Surface soils in the project area have been previously disturbed due to surface grading and industrial development. Additionally, foreign fill has been placed throughout the site for various construction needs.

### **3.2.1.2 Environmental Consequences**

There are no unique or special geologic resources in the area that would be affected by the proposed Water Reclamation Facility. Construction of the proposed project could impact soils in the project area. Approximately 250,000 cubic yards of soil would be disturbed during construction. Increased erosion could result if the proposed Water Reclamation Facility is sited or constructed improperly. With implementation of proper mitigation measures, these impacts would be reduced to an acceptable level.

#### **3.2.1.2.1 Alternative 1–Mitigation Options**

There is a possibility of increased erosion potential and windblown dust. By restricting construction equipment to the immediate construction areas and application of water or chemical dust suppressants soil disturbance and resulting erosion would be minimized. The proposed landscaping would also act to stabilize soils and reduce erosion. Proper grading would also be incorporated into the design so that water from runoff is directed to drainage structures.

#### **3.2.1.2.2 No Action–Mitigation Options**

If the proposed Water Reclamation Facility is not constructed, there would be no change in current impacts to land resources.

## **3.2.2 Surface Water, Stormwater, and Jurisdictional Waters**

### **3.2.2.1 Affected Environment**

The proposed project area was previously developed and is in compliance with CCRFGD master plan (2004) and the CNLV North Las Vegas North Neighborhood Flood Control Master Plan (CNLV 2005c). The project is within a 100-year flood zone (CCRFGD 2006). The Las Vegas Wash runs along the eastern boundary of the project area, and a concrete flood channel runs along the southern border adjacent to the UPRR. These channel surface water flows away from the site and will remain in place. The proposed project will not divert water from downstream habitat dependant upon that water (CCRFGD 2004). Sediment control measures in the forms of BMPs approved by the Nevada Division of Water Resources would be implemented during construction and a WQMP is in place to maintain the quality of effluent water discharged into Las Vegas Wash. No jurisdictional waters are located in the proposed project area.

#### **3.2.2.2 Environmental Consequences**

The proposed Water Reclamation Facility will discharge 20 mgd of treated water into the Las Vegas Wash. This amount of water is the same as what would be added if the CNLV continued to treat their water at CLV and CCWRD. Therefore, no net increase to the water flow of the wash is anticipated. As part of their commitment as a member of the Clean Water Coalition, the water will meet all of the standards developed by that organization to protect the water quality of the Las Vegas Valley. Therefore, there will be no long-term adverse impacts to surface waters.

Short-term, minor impacts could occur if sediment from construction activities reaches the channel of the Las Vegas Wash.

#### **3.2.2.2.1 Alternative 1–Mitigation Options**

During construction, short-term minor adverse impacts to water quality would occur if sediment is washed into the adjacent channel of Las Vegas Wash. With BMPs in place, the adverse impacts would be reduced to negligible levels.

#### **3.2.2.2.2 No Action–Mitigation Options**

The No-Action Alternative would result in no change to existing impacts to surface water, stormwater, and jurisdictional waters.

### **3.2.3 Air Quality**

Pursuant to the Clean Air Act (42 U.S.C. 7401), Federal actions must include measures to control particulate matter resulting from activities such as excavating and grading. The Clark County Department of Air Quality Management (CCDAQM) regulates construction activities that disturb soil in Clark County.

#### **3.2.3.1 Affected Environment**

The U.S. Environmental Protection Agency provides data regarding nonattainment areas within the United States (EPA 2005). The Las Vegas Valley is an area that is often on the nonattainment list (CCDAQM 2006). The main factors causing poor air quality in the Las Vegas Valley are particulate matter from numerous construction activities and carbon monoxide from gas powered vehicles. Air quality in the vicinity of the project area ranges from healthful to unhealthy throughout the year depending on various factors including wind speed, presence of inversion layers, and time of day.

#### **3.2.3.2 Environmental Consequences**

Dust and other airborne pollutants such as particulate matter are typically generated during earth moving and surface disturbing activities. These emissions would vary from day to day and activity to activity, with each activity having its own potential to release emissions. Because of the variability in timing and intensity of construction, estimating construction-related emissions is difficult. Nevertheless, it is assumed that during construction of the proposed facility there would be a short-term minor adverse impact to air quality during construction-related excavation and grading activities.

#### **3.2.3.2.1 Alternative 1–Mitigation Options**

This project will require construction permits from the CCDAQM. As part of the permit, Clark County would require that airborne particulates be minimized through a series of control measures designed to control windblown fugitive dust. These include treatment with dust palliative, and use of construction methods that will bring particulate levels to acceptable levels.



### **3.2.3.2.2 No Action–Mitigation Options**

If the proposed Water Reclamation Facility is not constructed, there will be no change in current air quality levels and no mitigation will be necessary.

## **3.2.4 Hazardous Waste**

Pursuant to NRS 459.400 and 459.600 hazardous materials must be properly stored, handled, and disposed. Spills that could occur during project construction include fuel or oil spills during maintenance and/or use of equipment at the site.

### **3.2.4.1 Affected Environment**

Existing conditions at the proposed location consist of an abundance of stained ground surface throughout the 20-acre site. Many unused storage tanks, drums and other potentially hazardous storage containers exist on the surface of the site.

Terracon (2001) assessed the project area and surrounding properties for past uses and existing hazardous wastes. Terracon reviewed historical documents, maps, and aerial photographs to determine any changes in land use. This research revealed that the subject property was used to store diesel fuel during its history and fuel may have been released into the soil. Federal and state regulatory agency databases were also examined to identify known locations where hazardous materials have been released. These databases indicate that a former occupant of the project site caused extensive soil contamination through the release of petroleum products. The site was remediated through removal of 370 tons of soil in 1991 (Terracon 2001:18).

A visual survey conducted by Terracon also identified containers of used oil and a compound known as concrete form release in the project area. Some of these were not labeled or were stored improperly. These were reportedly removed subsequent to Terracon's inspection (Terracon 2001:19). Aboveground storage tanks and former underground storage tanks were also identified on the subject property. Most of these were either empty or were being stored after removal from belowground.

Reconnaissance of adjoining properties revealed some indicators of environmental concern with the potential to impact the project area. These include properties to the west that have underground storage tanks and an underground petroleum pipeline to the east.

### **3.2.4.2 Environmental Consequences**

The 2001 Phase I analysis indicates that remediation through removal of the contaminated soil has mitigated the impacts identified at that time. The remaining aboveground and belowground storage containers would not represent an adverse impact as they can be removed to an approved waste storage facility. Construction of the Water Reclamation Facility could be impacted by leakage emanating from belowground storage facilities and pipelines on adjoining up-gradient properties.

#### **3.2.4.2.1 Alternative 1–Mitigation Options**

Construction of the proposed facility will require clean up of the property and an approved Corrective Action Plan from the Nevada Division of Environmental Protection (NDEP).

The 2001 Phase I analysis indicates a reasonable suspicion that hazardous materials may occur on adjacent properties and that these could affect the project area. Because site and neighboring

conditions may be changed since the earlier study, completion of a new Phase I hazardous materials analysis needs to be performed. Phase II environmental testing and remediation recommended in the new Phase I should also be implemented. This testing would include soil sampling from borings at pertinent areas to determine if storage tanks have leaked into project area soils. If contamination is found, the soils can be mitigated through one of the methods shown in Table 3-3. All contamination on this property needs to be reported to NDEP. Consultation will determine the appropriate corrective actions necessary to address the cleanup of contaminants at the site.

**Table 3-3. Hazardous Materials Mitigation Measures**

<b>Mitigation Technique</b>	<b>Advantages</b>	<b>Disadvantages</b>
Excavation	Fast, directly verifiable.	Causes maximum disturbance, high cost per unit for removal and disposal.
Vapor Extraction	Reasonably fast, causes minimal disturbance.	May require extensive exhaust gas treatment, effectiveness dependent on soil conditions, low effectiveness with less volatile compounds.
Landfarming	Relatively simple to design and implement, treated soil can be returned to the site, directly verifiable.	May require excavation, requires significant space, may not be effective for high concentrations.
Thermal Absorption	Very fast, can mitigate "hot spots," treated soil can be returned to the site.	Requires excavation, requires significant space, saturated soils may require dewatering.
Oxygen Releasing Compounds	Reasonably fast, causes minimal disturbance, relatively low cost.	Relatively new method with effectiveness under various conditions still being evaluated.
Natural Attenuation	Low cost, causes minimal disturbance, can be used in inaccessible areas.	Relatively slow, not effective against high concentrations.

### **3.2.4.2.2 No Action–Mitigation Options**

Under the No-Action Alternative, there would be no change to the impacts currently occurring on the site proposed for the Water Reclamation Facility.

## **3.2.5 Environmental Justice**

According to Executive Order 12898 (February 11, 1994) and Executive Order 12948 (amended 1995), all Federal actions must address and identify as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

### **3.2.5.1 Environmental Justice Affected Environment**

Examination of most recent available Census data provides information to identify minority populations in the area (U.S. Census 2000a). The largest minority living in the CNLV are people who describe themselves as Hispanic or Latino. Thirty-seven percent of the population falls into this grouping. The per capita income of Hispanics in the CNLV is \$10,903.00, compared with \$16,023 for the general population. One thousand six hundred and seventy of these Hispanic

families (10.8 percent of the Latino population) lived below the poverty level in 1999. This total compares to the general population where only 6.3 percent lived below the poverty level.

### **3.2.5.2 Environmental Justice Environmental Consequences**

There will be no disproportionately high or adverse effects to the health or environment of the CNLV's Latino or Hispanic populations if the proposed project is approved because none reside in the immediate project vicinity and all CNLV rate payers will benefit from the project.

As described above, a significant percentage of the Hispanic population are living below the poverty level (10.8 percent). If the proposed Water Reclamation Facility is constructed, it could provide employment opportunities to the Hispanic population of the city.

#### **3.2.5.2.1 Alternative 1–Mitigation Options**

Because no adverse effects were identified, no mitigation is warranted.

#### **3.2.5.2.2 No Action–Mitigation Options**

If the proposed action is not carried out there will be no change to current conditions.

### **3.2.6 Socioeconomic Conditions**

This section summarizes the existing socioeconomic conditions for people living in the vicinity of the proposed Water Reclamation Facility. This information was obtained from published and online sources, and from the U.S. Census Bureau.

#### **3.2.6.1 Socioeconomic Conditions Affected Environment**

The general community living in proximity to the project area is the CNLV. The following analyses are focused on people living in the 89030 zip code surrounding the proposed Water Reclamation Facility.

##### **3.2.6.1.1 Demographic Characteristics**

U.S. Census (2000) indicates 53,794 people consisting of 11,040 families who live in the 89030 zip code area. Forty-seven percent of individuals listed their race as "White." The next largest ethnic grouping included those categorized as Hispanic or Latino (62.9 percent), although these people may be of any race. Almost 19 percent of the population categorized themselves as Black or African American, while small percentages claimed American Indian, Asian or other descent (U.S. Census 2000b).

##### **3.2.6.1.2 Employment and Income**

Service, sales, and construction related occupations make up the largest percentage of the CNLV 89030 zip code labor force. More than 35 percent of the population work in service occupations, 18 percent work in sales, and 22 percent work in construction (U.S. Census 2000b). Median household income for the year 1999 was \$14,017; median family income was \$14,040.

### **3.2.6.2 Socioeconomic Conditions Environmental Consequences**

One concern raised at the Town Hall Meetings relates to reclassification of residential zones for commercial use. Homeowners purchase housing adjacent to open lots that are zoned for residential use and these are subsequently rezoned for commercial use. The proposed Water Reclamation Facility is located in an industrial area and is not near any residential neighborhoods or schools. Therefore, there would be no adverse impacts related to construction of commercial facilities near residential areas. If the proposed Water Reclamation Facility is constructed, approximately 20 jobs would be created for individuals living in the area. Also, construction of the proposed Water Reclamation Facility represent an economic benefit to the community because costs to treat wastewater by the CNLV would be lower than the current and projected future costs charged by the CLV and CCWRD. This represents a long-term moderate positive impact to socioeconomic conditions.

#### **3.2.6.2.1 Alternative 1–Mitigation Options**

Because construction of the proposed Water Reclamation Facility would have a beneficial effect on the socioeconomic situation, no mitigation measures are necessary.

#### **3.2.6.2.2 No Action–Mitigation Options**

If the proposed Water Reclamation Facility is not constructed, the sources of employment and more economical water treatment costs for local residents would not be available.

## **3.3 Cumulative Impacts**

NEPA requires an assessment of cumulative effects (CFR 40 Part 1508.7). Cumulative effects are those environmental consequences that result from the incremental effects of an action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects of the Action Alternative and the No-Action Alternative for each resource or issue with other projects are assessed in Table 3-4.

### **3.3.1 Past, Present, and Reasonably Anticipated Future Projects**

Traditional uses of the project area and surrounding area have been for commercial activities. Historical maps and aerial photographs indicate the land was mainly undeveloped until the early 1980s, although the railroad has been in place since 1905 (Terracon 2001:9-12; Myrick 1963:623-683). North Las Vegas is the second fastest growing city in the United States with 1,200 people per month moving to the city. It is assumed that residential development in the CNLV will continue although the precise locations of developments cannot be predicted. Projects that are reasonably foreseeable include the Craig Ranch Regional Park (a future sports resort complex and hotel/casino), several commercial ventures, and the continuing development of roads and stormwater drainage and control systems. Table 3-4 provides an analysis of the cumulative effects associated with development of the proposed Water Reclamation Facility.

Table 3-4. Analysis of Cumulative Effects

Alternative	Area of Effect	Other Actions Within Area of Effect	Cumulative Impact Within Area of Effect
<b>Geology, Seismicity, and Soils</b>			
No Action	20-acre project parcel	None	None
Alternative 1	20-acre project parcel	None	Short-term minor adverse effect reduced via BMPs
<b>Surface and Jurisdictional Waters</b>			
No Action	20-acre project parcel	None	None
Alternative 1	20-acre project parcel	None	Would not contribute to cumulative effect
<b>Air Quality</b>			
No Action	Las Vegas Valley airshed	Continuing Development	None
Alternative 1	Las Vegas Valley airshed	Continuing Development	Short-term minor adverse effect.
<b>Hazardous Waste</b>			
No Action	Project parcel and adjoining parcels on the west and east	None	None
Alternative 1	Project parcel and adjoining parcels on the west and east	None	Long-term moderate beneficial effect after Phase II remediation and cleanup completed.
<b>Environmental Justice</b>			
No Action	89030 zip code minority community	None	None
Alternative 1	89030 zip code minority community	None	Long-term minor beneficial effect
<b>Socioeconomic Conditions</b>			
No Action	89030 zip code area	Craig Ranch Regional Park	None
Alternative 1	89030 zip code area	Craig Ranch Regional Park	Long-term moderate beneficial effect

## **4.0 OTHER ANALYSES**

### **4.1 Relationship Between Short-Term Uses and Long-Term Productivity**

Section 1502.16 of NEPA presents the requirements of the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. The following sections discuss the short-term impacts of the proposed project, and the long-term adverse and beneficial effects of the proposed project, and the justification for developing the proposed project.

#### **4.1.1 Short-Term Uses of Man's Environment**

Short-term uses of man's environment include the project impacts that are considered significant and temporary. This includes construction impacts on soils and air quality. Additionally, there is potential for a fuel or chemical spill to occur during the construction of the proposed facilities.

Temporary soil impacts mainly relate to erosion during construction. These can be mitigated by implementing the identified mitigation measures and are considered less than significant. Impacts on air quality are expected during construction, although these are considered temporary and minor. These can be mitigated by implementing the identified mitigation measures.

#### **4.1.2 Long-Term Effects of the Proposed Project**

Construction of the proposed Water Reclamation Facility will not cause any long-term adverse impacts. Long-term minor to moderate beneficial impacts to environmental justice and socioeconomics would result as new jobs would be created and the cost of treating wastewater would be reduced.

## **4.2 Irretrievable Commitments of Resources**

### **4.2.1 Irreversible and Irretrievable Commitment of Resources**

Resources committed to the Action Alternative would be material, personnel, and financial assets. An irreversible commitment of resources occurs if the commitment cannot be changed once made. Irretrievably committed resources are used, consumed, destroyed, or degraded during construction, operation, and maintenance of a project and could not be reused or recovered for the lifespan of the project and beyond. Construction of the proposed Water Reclamation Facility would result in some irreversible and irretrievable commitments, including labor, capital, and construction materials. Table 4-1 summarizes irreversible and irretrievable commitments of resources of Alternative 1.

**Table 4-1. Irreversible and Irretrievable Commitment of Resources**

<b>Type of Commitment/Reason for Commitment</b>	<b>Irreversible</b>	<b>Irretrievable</b>
<b>Geology, Seismicity, and Soils</b>		
Sands and gravels during construction	Yes	Yes
<b>Surface Water and Jurisdictional Waters</b>		
None	–	–
<b>Access and Transportation</b>		
Personnel and equipment to transport solid waste	Yes	Project lifespan
<b>Land Use and Recreation</b>		
Exclusion of other uses	No	Project lifespan
<b>Air Quality</b>		
Temporary degradation of air quality during construction	Yes	Yes
<b>Hazardous Waste</b>		
Personnel and equipment for cleanup	Yes	Pre-construction
<b>Environmental Justice</b>		
Increased local employment	–	Project lifespan
<b>Socioeconomics</b>		
Decreased wastewater treatment rates	–	Project lifespan

## **5.0 ENVIRONMENTAL COMMITMENTS (MITIGATION PLAN)**

Table 5.1 summarizes the measures that would be used to minimize impacts occurring as a result of construction and maintenance of the proposed Water Reclamation Facility. For most of the categories, BMPs will be used routinely to limit environmental consequences. Also, the WQMP defines procedures to promote effluent water quality.

Long-term positive benefits are predicted for environmental justice and socioeconomics. The project should result in increased employment of local individuals, and economic benefits in the form of lower water reclamation costs for the CNLV customer. Therefore, no mitigation measures are necessary for these resources categories.



**Table 5-1. Environmental Commitments (Mitigation Plan) for the Proposed Water Reclamation Facility**

Impact	Timing	Mitigation	Responsible Party	Responsible for Compliance
<b>Geology, Seismicity, and Soils</b>				
Soil disturbance	During construction	Sound engineering to ensure proper grades and compaction. Application of water to inhibit erosion.	Construction contractor	CNLV
<b>Surface Water</b>				
Flooding	Life of project	Construct flood control facilities	Construction contractor	CNLV
<b>Air Quality</b>				
Particulates that become airborne during grading or construction	During construction	Application of water to control particulates.	Construction contractor	CCDAQM
<b>Hazardous Waste</b>				
Vehicle emissions and spills	During construction	All vehicles would be maintained in a clean and well-functioning state to avoid or minimize contamination from automotive fluids. All vehicle or hazardous waste leaks, spills or releases would be reported immediately to the designated environmental manager. All spill materials would be cleaned up and disposed of at an approved offsite landfill or repository.	Construction contractor	Nevada Division of Environmental Protection
Contaminated Soil	Before construction	All aboveground storage tanks, 55-gallon drums, other containers and any other hazardous materials would be removed to an approved landfill or repository.	CNLV	Nevada Division of Environmental Protection
<b>Hazardous Materials</b>				
	Before construction	Complete Phase I and Phase II analysis and remediation	CNLV	Nevada Division of Environmental Protection
<b>Water Quality</b>				
Drainage and sediment control	During and after construction	The CNLV has developed an WQMP that meets Section 208 requirements of the Clean Water Act.	CNLV	Clean Water Coalition
<b>Environmental Justice</b>				
Increased employment	During and after construction	None necessary	CNLV	CNLV
<b>Socioeconomic Conditions</b>				
Decreased water treatment costs	After construction	None necessary	CNLV	CNLV

## **6.0 CONSULTATION AND COORDINATION**

Scoping is the process to learn the concerns of individuals, organizations, and agencies about a proposed project. Scoping is an integral part of the NEPA review process because it allows interested parties to participate in developing a list of issues that will be discussed in an environmental document.

Beginning in 2004, options for developing a Water Reclamation Facility were evaluated through various public and agency venues. Greeley and Hansen (2005) evaluated nine locations, all of which were found unsuitable because of economic, socioeconomic, or feasibility considerations.

### **6.1 Public Meetings**

The final location option presented here also resulted from a series of Town and City Council Meetings. The Town Meetings provided forums for residents to voice their concerns and obtain information about project specifics that could affect their neighborhoods. Town Meetings were held on: November 3, 2005 and June 8, 2006. A public hearing was held on October 4, 2005. The issues raised are as follows:

- Citizens were concerned odors would be noticeable.
- Citizens were concerned the proposed facility would be constructed adjacent to residential neighborhoods.
- Citizens were concerned vacant lands adjacent to residential neighborhoods would be changed from residential to commercial zoning.

Additional meetings are planned for the future so area residents will be apprised of project developments and can continue to participate in the planning process.

### **6.2 City Council Meetings**

Special City Council Meetings held on October 20, 2004 and March 16, 2005, explored site selection considerations, economic feasibility, and resident concerns regarding the proposed locations. The final location was chosen at the March 16 City Council Meeting.

### **6.3 Agency Scoping Meeting**

An agency scoping meeting was conducted on August 17, 2006, at NewFields offices. Reclamation and CNLV representatives met with NewFields and Greeley and Hansen to provide a venue for all of the parties to discuss the format and content of the EA. Their comments and suggestions led to the EA content presented here.

## **7.0 PREPARERS AND CONTRIBUTORS**

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## 8.0 REFERENCES

- Bureau of Reclamation. 2006. *Guidelines for Preparing, Reviewing and Processing Water Reclamation and Reuse Project Proposals Under Title XVI of Public Law 102-575, As Amended*. Information available online at: <http://www.usbr.gov/pmts/writing/guidelines/Guidelines.pdf>
- CCRFGD (Clark County Regional Flood Control District) 2006. *Flood Zone*. Information available online at: <http://breccia.ccrfgd.org/website/floodex/>
- CCRFGD (Clark County Regional Flood Control District) 2004. *Supplement Programmatic Environmental Impact Statement, Clark County Regional Flood Control District, 2002 Master Plan Update*. SWCA Environmental Consultants, Las Vegas, Nevada.
- CCDAQM (Clark County Department of Air Quality Management) 2006. *Air Quality*. Information available online at: <http://www.ccairquality.org/>
- CCDAQM (Clark County Department of Air Quality Management) 2003. *Construction Activities Dust Control Handbook*. Clark County Department of Air Quality Management, Las Vegas, Nevada.
- CNLV (City of North Las Vegas) 2004. *City of North Las Vegas Water Reclamation Facility Cost Analysis*. Black and Veatch, Las Vegas, Nevada.
- CNLV (City of North Las Vegas) 2005a. *City of North Las Vegas Town Hall Meeting, November 3, 2005*. Public Meeting, November 2005.
- CNLV (City of North Las Vegas) 2005b. *City of North Las Vegas Proposed Water Reclamation Facility*. Clark County Board of County Commissioners Meeting and Public Hearing, October 4, 2005.
- CNLV (City of North Las Vegas) 2005c. *Water Reclamation Facility 208 Water Quality, Management Plan Amendment*. Montgomery, Watson, and Harza, Las Vegas, Nevada.
- EPA (U.S. Environmental Protection Agency) 2005. *Nevada Nonattainment Areas*. Information available online at: [http://www.epa.gov/cgi-bin/broker?\\_service=airdata&\\_program=progs.webprogs.nonat.scl&\\_debug=2&geotype=st&geocode=NV&geoname=Nevada&apol=CO&nulmap=0&geofeat=&mapsize=zsc&reqtype=viewmap](http://www.epa.gov/cgi-bin/broker?_service=airdata&_program=progs.webprogs.nonat.scl&_debug=2&geotype=st&geocode=NV&geoname=Nevada&apol=CO&nulmap=0&geofeat=&mapsize=zsc&reqtype=viewmap)
- Greeley and Hansen, LLC 2005. *Site Selection Study, City of North Las Vegas Water Reclamation Facility*. Greeley and Hansen, Las Vegas, Nevada.
- Longwell, C.R., E.H. Pampeyan, Ben Bowyer, and R.J. Roberts 1965. *Geology and Mineral Deposits of Clark County, Nevada*. Nevada Bureau of Mines Bulletin 62, Mackay School of Mines, University of Nevada, Reno.
- Myrick, David F. 1963. *Railroads of Nevada and Eastern California, Vol. 2: The Southern Roads*. Howell-North Books, Berkeley.

NPS (National Park Service) 1997. *How to Apply the National Register Criteria for Evaluation*. Revised, National Register Bulletin 15, first published in 1990. National Park Service Interagency Resources Division, National Register Branch, Washington, D.C.

Terracon 2001. *Phase I Environmental Site Assessment, 22 Acre Parcel, Sec Frehner Rd. & Losee Rd., North Las Vegas, Nevada*. Report prepared for Frehner Construction Corporation. Terracon, Las Vegas, Nevada.

UNLV (University of Nevada Las Vegas) 2003. *Las Vegas Valley Seismic Response Project*. Information available online at: <http://geoscience.unlv.edu/pub/snelson/LVSRP/>.

USGS (United States Geological Survey) 2002. *National Seismic Hazard Maps, Conterminous States Probabilistic Maps & Data*. Information available online at: [http://earthquake.usgs.gov/research/hazmaps/products\\_data/48\\_States/index.php](http://earthquake.usgs.gov/research/hazmaps/products_data/48_States/index.php)

U.S. Census (United States Census) 2000a. *American Factfinder*. Information available online at: [http://factfinder.census.gov/servlet/QTTable?\\_bm=y&-geo\\_id=86000US89030&-qr\\_name=DEC\\_2000\\_SF1\\_U\\_DPI&-ds\\_name=D&-lang=en&-redoLog=false](http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=86000US89030&-qr_name=DEC_2000_SF1_U_DPI&-ds_name=D&-lang=en&-redoLog=false)

U.S. Census (United States Census) 2000b. *Census 2000 Demographic Profile Highlights, Zip Code 89030*. Information available online at:

[http://factfinder.census.gov/servlet/SAFFacts?\\_event=&geo\\_id=86000US89030&\\_geoContext=01000US%7C04000US32%7C05000US32003%7C16000US3251800%7C86000US89030%7C14000US32003003603&\\_street=4200+Freshner+Road&\\_county=&\\_cityTown=North+Las+Vegas&\\_state=04000US32&\\_zip=89030&\\_lang=en&\\_sse=on&ActiveGeoDiv=search\\_by\\_address&\\_useEV=&pctxt=fph&pgsl=860&\\_submenuId=factsheet\\_1&\\_ds\\_name=DEC\\_2000\\_SAFF&\\_ci\\_nbr=400&\\_qr\\_name=DEC\\_2000\\_SAFF\\_R1010&\\_reg=DEC\\_2000\\_SAFF\\_R1010%3A400&\\_keyword=&\\_industry=](http://factfinder.census.gov/servlet/SAFFacts?_event=&geo_id=86000US89030&_geoContext=01000US%7C04000US32%7C05000US32003%7C16000US3251800%7C86000US89030%7C14000US32003003603&_street=4200+Freshner+Road&_county=&_cityTown=North+Las+Vegas&_state=04000US32&_zip=89030&_lang=en&_sse=on&ActiveGeoDiv=search_by_address&_useEV=&pctxt=fph&pgsl=860&_submenuId=factsheet_1&_ds_name=DEC_2000_SAFF&_ci_nbr=400&_qr_name=DEC_2000_SAFF_R1010&_reg=DEC_2000_SAFF_R1010%3A400&_keyword=&_industry=)

*APPENDIX B*  
*AIR QUALITY CALCULATIONS*





# CALCULATION SHEET-COMBUSTABLE EMISSIONS-PROPOSED ACTION

Assumptions for Combustable Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	8	240	576000
Diesel Road Compactors	0	100	8	240	0
Diesel Dump Truck	1	300	8	240	576000
Diesel Excavator	1	300	8	240	576000
Diesel Hole Cleaners/Trenchers	0	175	8	240	0
Diesel Bore/Drill Rigs	0	300	8	240	0
Diesel Cement & Mortar Mixers	3	300	8	240	1728000
Diesel Cranes	2	175	8	240	672000
Diesel Graders	0	300	8	240	0
Diesel Tractors/Loaders/Backhoes	2	100	8	240	384000
Diesel Bull Dozers	1	300	8	240	576000
Diesel Front End Loaders	1	300	8	240	576000
Diesel Fork Lifts	3	100	8	240	576000
Diesel Generator Set	3	40	8	240	230400

Emission Factors						
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810
						587.300



# CALCULATION SHEET-COMBUSTABLE EMISSIONS-PROPOSED ACTION

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations								
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr	
Water Truck	0.279	1.314	3.485	0.260	0.254	0.470	340.227	
Diesel Road Paver	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Diesel Dump Truck	0.279	1.314	3.485	0.260	0.254	0.470	340.227	
Diesel Excavator	0.216	0.825	2.920	0.203	0.197	0.470	340.417	
Diesel Hole Cleaners\Trenchers	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Diesel Bore/Drill Rigs	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Diesel Cement & Mortar Mixers	1.162	4.418	13.863	0.914	0.895	1.390	1008.684	
Diesel Cranes	0.326	0.963	4.236	0.252	0.244	0.541	392.636	
Diesel Graders	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Diesel Tractors/Loaders/Backhoes	0.783	3.474	3.055	0.580	0.563	0.402	292.451	
Diesel Bull Dozers	0.229	0.876	3.021	0.209	0.203	0.470	340.417	
Diesel Front End Loaders	0.241	0.984	3.174	0.222	0.216	0.470	340.354	
Diesel Fork Lifts	1.257	4.926	5.433	0.882	0.857	0.603	438.487	
Diesel Generator Set	0.307	0.955	1.516	0.185	0.180	0.206	149.116	
<b>Total Emissions</b>	<b>5.078</b>	<b>20.048</b>	<b>44.188</b>	<b>3.968</b>	<b>3.863</b>	<b>5.490</b>	<b>3983.018</b>	

Conversion factors	
Grams to tons	1.102E-06

# CALCULATION SHEET-SUMMARY OF EMISSIONS-PROPOSED ACTION

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)							
Emission source	VOC	CO	NOx	PM-10	PM-2.5	SO <sub>2</sub>	
Combustable Emissions	5.08	20.05	44.19	3.97	3.86	5.49	
Construction Site-fugitive PM-10	NA	NA	NA	52.80	10.56	NA	
Construction Workers Commuter & Trucking	0.97	9.06	1.25	0.02	0.02	NA	
Total emissions	6.05	29.11	45.43	56.79	14.44	5.49	
De minimis threshold	100.00	100.00	100.00	70.00	NA	NA	

# CALCULATION SHEET-TRANSPORTATION COMBUSTABLE EMISSIONS-PROPOSED ACTION

Construction WorkerPersonal Vehicle Commuting to Construction Sight-Passenger and Light Duty Trucks									
Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	120	240	10	10	0.43	0.51	0.94
CO	12.4	15.7	120	240	10	10	3.94	4.98	8.92
NOx	0.95	1.22	120	240	10	10	0.30	0.39	0.69
PM-10	0.0052	0.0065	120	240	10	10	0.00	0.00	0.00
PM 2.5	0.0049	0.006	120	240	10	10	0.00	0.00	0.00

Heavy Duty Trucks Delivery Supply Trucks to Construction Sight									
Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	240	2	2	0.01	0.02	0.03
CO	1.32	3.21	60	240	2	2	0.04	0.10	0.14
NOx	4.97	12.6	60	240	2	2	0.16	0.40	0.56
PM-10	0.12	0.33	60	240	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	240	2	2	0.00	0.01	0.02

Commute to New Site									
Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	0	0	0	-	0.00	-
CO	12.4	15.7	60	0	0	0	-	0.00	-
NOx	0.95	1.22	60	0	0	0	-	0.00	-
PM-10	0.0052	0.0065	60	0	0	0	-	0.00	-
PM 2.5	0.0049	0.006	60	0	0	0	-	0.00	-

POV Source: USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE 6 highway vehicle emission factor model.  
Fleet Characterization: 20 POVs commuting to work were 50% are pick up trucks and 50% passenger cars

CALCULATION SHEET-FUGITIVE DUST-PROPOSED ACTION

Fugitive Dust Emissions at New Construction Site (1)				
Construction Site	Emission Factor tons/acre/month (1)	Total Area- Construction Site/month	Months/yr	Total PM-10 Emissions tns/yr
Fugitive Dust Emissions	0.11	40.00	12	52.80
				Total PM-2.5 (2)
				10.56

1. Mid-Atlantic Regional Air Management Association (MARAMA). Fugitive Dust-Construction Calculation Sheet can be found online at: [http://www.marama.org/visibility/Calculation\\_Sheets/](http://www.marama.org/visibility/Calculation_Sheets/). MRI= Midwest Research Institute, Inventory of Agricultural Tiling, Unpaved Roads, Airstrips and construction Sites., prepared for the U.S. EPA, PB 238-929, Contract 68-02-1437 (November 1977)
2. 20% of the total PM-10 emissions are PM-2.5 (EPA 2006).

Coastruction Site Area Proposed Prioject	Demension (ft)		Total Acres/month
	Length	Width	
Construction Area-Fence	-		40.00
Total			40.00

Conversion Factors	Miles to feet	Acres to sq ft	Sq ft to acres	Sq ft in 0.5 acres
	5,280	0	43,560	21,780

1. This model is based on a monthly emission factor. The construction activity assumptions are based on disturbing entire construction area every month the construction area by month can be multiplied by the PM-10 monthly emission factor.



*APPENDIX C*  
*FEDERAL LISTED SPECIES*





**Federally Listed Animal Species Potentially Occurring Within Clark County,  
Nevada**

Common/Scientific Name	Federal Status	Habitat	Potential to occur within Project Area
<b>BIRDS</b>			
<b>Yellow-billed cuckoo</b> (Western U.S. Distinct Population Segment) <i>Coccyzus americanus</i>	Candidate	Dense willow and cottonwood stands with low vegetation in river floodplains.	No – Suitable habitat does not occur within the project area.
<b>Southwestern willow flycatcher</b> <i>Empidonax traillii extimus</i>	Endangered	Thickets, scrubby and brushy areas, open second growth, and riparian woodland. Limited in Nevada to the southern tip of the state, along the Colorado River and its tributaries.	No – Project area not located near the Colorado River.
<b>Yuma clapper rail</b> <i>Rallus longirostris yumanensis</i>	Endangered	Marshes with stands of cattail and bulrush.	No – Suitable habitat does not occur within the project area.
<b>REPTILES AND AMPHIBIANS</b>			
<b>Desert tortoise</b> (Mojave population) <i>Gopherus agassizii</i>	Threatened	Occurrences typically are between 1,000 and 4,000 feet in elevation. Requires firm, but not hard, ground for construction of burrows in banks of washes or compacted sand. Known populations occur in Mojave Desert habitat and live primarily on flats and alluvial fans.	No – Low probability due to lack of suitable habitat and food resources.
<b>Relict leopard frog</b> <i>Rana onca</i>	Candidate	Limited in Nevada to six streams and springs in the Lake Mead National Recreation Area.	No – Project area located west of the Lake Mead National Recreation Area.
<b>FISHES</b>			
<b>Devil's Hole pupfish</b> <i>Cyprinodon diabolis</i>	Endangered	Endemic to a deep limestone pool occurring only in Devil's Hole, Ash Meadows area, Death Valley National Park, Nevada.	No – Project area located southeast of Devil's Hole and Ash Meadows and east of Death Valley National Park.
<b>Pahrump poolfish</b> <i>Empetrichthys latos</i>	Endangered	Springs. Limited to three established populations in Nevada - Corn Creek Spring on the Desert National Wildlife Range, Shoshone Springs, and an irrigation reservoir at Spring Mountains Ranch State Park.	No – Project area not located near the Corn Creek Spring on the Desert National Wildlife Range, Shoshone Springs, or Spring Mountains Ranch State Park.



Table 3-2, continued

Common/Scientific Name	Federal Status	Habitat	Potential to occur within Project Area
<b>Humpback chub</b> <i>Gila cypha</i>	Endangered	Pools with turbulent to little or no current and depths of 3 to 50 feet with of silt, sand, boulder, or bedrock substrates. Limited to portions of the Colorado River. Believed extirpated from Nevada.	No - Project area located west of the Colorado River.
<b>Bonytail chub</b> <i>Gila elegans</i>	Endangered	Big or mainstream rivers with warm and turbid pools and eddies of warm. Limited in Nevada to Lake Mohave along the Arizona and Nevada border.	No - Project area located northwest of Lake Mohave.
<b>Virgin River chub</b> <i>Gila seminuda</i>	Endangered (Only Virgin River population Endangered; Muddy River population Sensitive Species)	Rivers with waters of less than 90°F with deeper, swift flowing areas that are not turbulent and have boulders, sand, and gravel substrates in water less than. In Nevada limited to the Virgin River.	No - Project area located west of the Virgin River.
<b>Moapa dace</b> <i>Moapa coriacea</i>	Endangered	Spring pools, spring feeders, tributaries, and main river waters with low turbidity is low. Occurring in the Muddy River and associated thermal spring systems within the Warm Springs in Nevada.	No - Project area located west of the Muddy River.
<b>Lahontan cutthroat trout</b> <i>Oncorhynchus clarkii henshawi</i>	Threatened	Lakes and streams; requires cool, well-oxygenated water. In streams, uses rocky areas, riffles, deep pools, and areas under logs and overhanging banks.	No – Suitable habitat does not occur within the project area.
<b>Woundfin</b> <i>Plagopterus argentissimus</i>	Endangered	Rivers with sand and gravel substrates; requires runs and slow waters that are adjacent to riffles. Limited to the mainstem of the Virgin River and downstream to Lake Mead in Nevada.	No - Project area located west of the Virgin River and Lake Mead.
<b>Colorado pikeminnow</b> <i>Ptychocheilus lucius</i>	Endangered	Rivers with swift flowing, turbid waters that have slow, warm backwaters. Limited to the mainstem of the Colorado River. Believed extirpated from Nevada.	No - Project area located west of the Colorado River.

Table 3-2, continued

Common/Scientific Name	Federal Status	Habitat	Potential to occur within Project Area
<b>Razorback sucker</b> <i>Xyrauchen texanus</i>	Endangered	Backwaters, sloughs, oxbow lakes, and seasonally inundated flood plain. Limited to the mainstem of the Colorado River, Lake Mohave, and upstream Lake Mead.	No - Project area located west of the Colorado River and Lake Mead and northwest of Lake Mohave.

**Source:** Nevada Fish and Wildlife Office 2007, USFWS 2005

NO NATIVE PLANTS EXIST ON THE PROPOSED ACTION SITE OR THE FREHNER SITE ALTERNATIVE LOCATION, SO NO FEDERALLY LISTED PLANT SPECIES WOULD EXIST.



*APPENDIX D*  
*DISTRIBUTION LIST*





Nevada State Clearinghouse  
Department of Administration  
209 East Musser Street, Room 200  
Carson City, NV 89701-4298  
[clearinghouse@budget.state.nv.us](mailto:clearinghouse@budget.state.nv.us)  
(electronic coordination)

Mr. Robert Williams  
State Supervisor  
U.S. Fish and Wildlife Service  
Nevada Ecological Field Office  
1340 Financial Blvd, Suite 234  
Reno, NV 89502

Commissioner Rory Reid  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Commissioner Tom Collins  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Commissioner Lawrence Weekly  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Mr. John Mendoza  
S. Planner  
Clark County Department of Air Quality &  
Environmental Management  
500 S. Grand Central Parkway  
PO Box 555210  
Las Vegas, NV 89155

Richard Mendez, PhD  
General Manager  
Clark County Water Reclamation District  
5857 E. Flamingo Road  
Las Vegas, NV 89122

Mr. Rob Mrowka  
Environmental Division Manager  
Clark County Dept of Air Quality &  
Environmental Management  
500 S. Grand Central Parkway  
PO Box 555210  
Las Vegas, NV 89155-5210

Ms. Virginia Valentine  
County Manager/CEO  
Clark County (Las Vegas), Nevada  
500 S. Grand Central Parkway  
Las Vegas, NV 89155

Mr. Douglas Selby  
City Manager  
City of Las Vegas  
400 Stewart Street  
Las Vegas, NV 89101

Mr. Dennis B. Porter, PE  
Director Utility Services  
City of Henderson  
PO Box 95050  
MSC 124  
Henderson, NV 89009-5050

Ms. Mary Kay Peck,  
City Manager  
City of Henderson  
PO Box 95050  
Henderson, NV 89009

Mr. Michael Anthony Dias  
Chairman  
Sunrise Manor Town Advisory Board  
2538 Carruth Court  
Las Vegas, Nevada 89121

Ms. Pat Mulroy  
General Manager  
Southern Nevada Water Authority  
1001 S. Valley View Blvd  
Las Vegas, NV 89153

Ms. Kay Brothers  
Deputy General Manager  
Southern Nevada Water Authority  
PO Box 99956  
Las Vegas, NV 89193-9956

Mr. Douglas Karafa  
Program Administrator  
Clean Water Coalition  
150 N. Stephanie Street, Suite 130  
Henderson, NV 89074

Las Vegas Library  
Reference Department  
833 Las Vegas Blvd North  
Las Vegas, NV 89101

North Las Vegas Library District  
Main Branch  
2300 Civic Center Drive  
North Las Vegas, NV 89030





DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Mr. Robert Williams, State Supervisor  
U.S. Fish and Wildlife Service  
Nevada Ecological Field Office  
1340 Financial Blvd, Suite 234  
Reno, NV 89502

Dear Mr. Williams

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI





DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

The Honorable Rory Reid  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Dear Commissioner Reid

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
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Chief, Environmental Management Flight

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*Global Power For America*



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99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

The Honorable Tom Collins  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Dear Commissioner Collins

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

The Honorable Lawrence Weekly  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89106

Dear Commissioner Weekly

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Mr. John Mendoza, S. Planner  
Clark County Department of Air Quality & Environmental Management  
500 S. Grand Central Parkway  
PO Box 555210  
Las Vegas, NV 89155

Dear Mr. Mendoza

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Richard Mendez, PhD  
General Manager  
Clark County Water Reclamation District  
5857 E. Flamingo Road  
Las Vegas, NV 89122

Dear Dr. Mendez

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Mr. Rob Mrowka  
Environmental Division Manager  
Clark County Dept of Air Quality & Environmental Management  
500 S. Grand Central Parkway  
PO Box 555210  
Las Vegas, NV 89155-5210

Dear Mr. Mrowka

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Ms. Virginia Valentine  
County Manager/CEO  
Clark County Nevada  
500 S. Grand Central Parkway  
Las Vegas, NV 89155

JAN 30 2008

Dear Ms. Valentine

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NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Mr. Douglas Selby  
City Manager  
City of Las Vegas  
400 Stewart Street  
Las Vegas, NV 89101

JAN 30 2008

Dear Mr. Selby

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Mr. Dennis B. Porter, PE  
Director Utility Services  
City of Henderson  
PO Box 95050  
MSC 124  
Henderson, NV 89009-5050

JAN 30 2008

Dear Mr. Porter

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99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Ms. Mary Kay Peck  
City Manager  
City of Henderson  
PO Box 95050  
Henderson, NV 89009

1 JAN 30 2008

Dear Ms. Peck

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

As required by the *National Environmental Policy Act* (NEPA) and 32 CFR 989, *Air Force Environmental Impact Analysis Process* (EIAP), the USAF has prepared a draft Environmental Assessment (EA), in cooperation with the Bureau of Reclamation, analyzing potential impacts that could result from initiation of the proposed action. The assessment resulted in a Finding of No Significant Impact (FONSI). The USAF requests your support in the NEPA process for the proposed action by reviewing the attached draft EA and draft FONSI. Please forward any concerns or comments to Mr. Mike Estrada at 99ABW/PA, 4430 Grissom Avenue, Suite 107, Nellis AFB, NV, 89191, or e-mail him at [michael.estrada@nellis.af.mil](mailto:michael.estrada@nellis.af.mil) by 5 Mar 2008. We appreciate your assistance in the EIAP for the proposed action.

Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*





DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

The Honorable Michael Anthony Dias  
Chairman, Sunrise Manor Town Advisory Board  
2538 Carruth Court  
Las Vegas, Nevada 89121

IAN 30 2008

Dear Chairman Dias

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*



DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Ms. Pat Mulroy  
General Manager  
Southern Nevada Water Authority  
1001 S. Valley View Blvd  
Las Vegas, NV 891531

Dear Ms. Mulroy

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*





DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Ms. Kay Brothers  
Deputy General Manager  
Southern Nevada Water Authority  
PO Box 99956  
Las Vegas, NV 89193-9956

JAN 30 2008

Dear Ms. Brothers

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*



DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Mr. Douglas Karafa  
Program Administrator  
Clean Water Coalition  
150 N. Stephanie Street, Suite 130  
Henderson, NV 89074

Dear Mr. Karafa

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*





DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

JAN 30 2008

Las Vegas Library  
Reference Department  
833 Las Vegas Blvd North  
Las Vegas, NV 89101

Mesdames, Sirs

The United States Air Force (USAF) proposes to initiate an Enhanced Use Lease (EUL) with City of North Las Vegas (CNLV) for 40 acres of Nellis Air Force Base (AFB) property located at the southwest corner of the installation. The property is currently developed as part of the Nellis AFB Sunrise Golf Course. CNLV would construct a waste water reclamation facility on the property that would treat up to 50 million gallons of waste water per day. The Department of the Interior, Bureau of Reclamation, would provide partial funding for the project to CNLV, subject to Congressional appropriation and availability of funding, under Section 1620 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI), as amended by the Reclamation Recycling and Water Conservation Act (P.L. 104-266).

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*



DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE, NEVADA

Ms. Eloisa V. Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

North Las Vegas Library District  
Main Branch  
2300 Civic Center Drive  
North Las Vegas, NV 89030

JAN 30 2008

Mesdames, Sirs

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Sincerely

  
ELOISA V. HOPPER, DAF  
Chief, Environmental Management Flight

Attachment:  
Draft EA and Draft FONSI

*Global Power For America*





*APPENDIX E*  
*PUBLIC NOTICES, COMMENTS AND RESPONSES*





# Monday Morning

Asked the question for the umpteenth time after his wistful aside, he reverted to his standard answer: "I don't have to make that decision until May, and in the meantime I'm going to continue to operate as a state senator."

## SIG SAW IT COMING

Another man who can safely be considered a Nevada Republican institution was trying not to say "I told you so" last week, as it began to look likely that McCain would secure the nomination.

"I never did get scared, because he was so resilient," Sig Rogich said of the candidate he got behind early and has been an informal but frequent adviser to. "In all my conversations with him, he had such a positive, upbeat way about things that gave everybody confidence."

Last summer, McCain's political obituaries were being written thanks to a financial implosion and staff shake-up

vans would give a prominent voting for McCain should be the nominee, despite McCain's open support for Yucca Mountain.

Rogich said he talked to McCain last week, after his win in Florida, and "I said, 'At the end of this, you were successful because of you, not all those so-called professionals there to help you, including me. You never lost faith in your ability to come back.'"

Rogich, whose help getting the first President Bush

They asked him, and he said yes, according to the organization.

Andy Matthews, the free-market think tank's spokesman, said people there had heard Bush was planning to visit for a fundraiser and foreign policy speech, and sent an invitation to the White House offering to host the speech.

"Obviously, there was a lot of excitement around here," he said. "It was a great opportunity to elevate our profile."

Venetian.

NPRI has something of a counterpoint in the Progressive Leadership Alliance of Nevada, which also has seen an evolution in recent years.

Once a relatively loose umbrella organization of different liberal-leaning groups, PLAN increasingly speaks with one voice, staging protests and other grass-roots

## BANKRUPTCY

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### U.S. Air Force Invites Public Comments on the Draft Environmental Assessment for Enhanced Use Lease of Nellis Air Base Land to City of North Las Vegas for Construction and Operation of a Waste Water Reclamation Facility, Clark County, Nevada

The U.S. Air Force announces the availability of a draft Environmental Assessment (EA) for enhanced use lease of 40 acres of land on Nellis Air Force Base to City of North Las Vegas for construction and operation of a waste water reclamation facility. City of North Las Vegas would construct the facility in phases to treat from 20 million gallons of wastewater per day (mgd) up to 50 mgd. The U.S. Department of the Interior, Bureau of Reclamation, is a cooperating agency in the proposed action.

You may view the draft EA and draft Finding of No Significant Impact (FONSI) at <http://www.nellis.af.mil/library/environmental.asp> or request a copy from the address below. Copies are also available for review at the Las Vegas Library, Reference Department, 833 Las Vegas Blvd North, Las Vegas, NV 89101, and the City of North Las Vegas Library Main Branch, 2300 Civic Center Drive, North Las Vegas, NV 89030. Please provide any comments on the draft EA and draft FONSI by March 5, 2008, to:

Mr. Mike Estrada

99th Air Base Wing Office of Public Affairs (99ABW/PA)

4430 Grissom Ave., Suite 107, Nellis AFB, NV 89191

For general information, contact Mr. Estrada at: (702) 652-2753

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Governor

STATE OF NEVADA



DEPARTMENT OF ADMINISTRATION

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Fax (775) 684-0260  
<http://www.budget.state.nv.us/>

CEVN -  
File  
ANDREW K. CLINGER  
Director

March 7, 2008

Eloisa Hopper  
99 CES/CEV  
4349 Duffer Dr, Suite 1601  
Nellis AFB, NV 89191-7007

Re: SAI NV # **E2008-351**

Reference:

Project: **Draft EA for a Waste Water Reclamation Facility on Nellis AFB**

Dear Eloisa Hopper:

The State Clearinghouse has processed the proposal and has no comment.

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0209.

Sincerely,

A handwritten signature in cursive script, appearing to read "Krista Coulter".

Krista Coulter  
Nevada State Clearinghouse



-----Original Message-----

From: Randy Robinson [mailto:[Randy.Robinson@cityofhenderson.com](mailto:Randy.Robinson@cityofhenderson.com)]

Sent: Wednesday, March 05, 2008 4:05 PM

To: Estrada, Michael F Civ USAF ACC 99 ABW/PA

Cc: Dennis Porter; Donald Pelissier

Subject: City of Henderson Department of Utility Services Comments

Mr. Estrada,

At your request, the City of Henderson's Department of Utility Services has reviewed the Draft Environmental Assessment (EA) for Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas for Construction and Operation of a Water Reclamation Facility, Nellis Air Force Base, Nevada.

The EA indicates that the Proposed Action will provide a cost-effective, expandable, water resource sensitive site alternative that has received a positive FONSI. Therefore, we support the Proposed Action.

Randy Robinson

Deputy Director

for

Dennis B. Porter, P.E.

Director of Utility Services







**CleanWater**  
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Management*

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**Clean Water Coalition  
Management Board**

**Chip Maxfield**

**CWC Chairman**  
Board Chairman,  
Clark County Water  
Reclamation District



**Clark County  
Water Reclamation  
DISTRICT**

The "Clean  
Water Team"

**Larry Brown**

**CWC Vice Chairman**  
Councilman,  
City of Las Vegas



**Steven Kirk**

**CWC Secretary**  
Councilman,  
City of Henderson



**Michael Montandon**

**CWC Board Member**  
Mayor  
City of North Las Vegas



**Douglas Karafa**

**Clean Water Coalition  
General Manager**

March 4, 2008

Mr. Mike Estrada

99<sup>th</sup> Air Base Wing Office of Public Affairs (99ABW/PA)  
4430 Grissom Ave., Suite 107  
Nellis AFB, NV 89191

RE: Comment on Draft Environmental Assessment for Enhanced Use Lease of  
Nellis AFB Land to City of North Las Vegas for Construction and Operation of  
a Waste Water Reclamation Facility, Clark County, Nevada

Mr. Estrada:

The Clean Water Coalition (CWC) is Joint Powers Authority formed under Nevada Law. The CWC's Member Agencies are the Clark County Water Reclamation District, and the Cities of Henderson, Las Vegas, and North Las Vegas. The CWC has an interest in this project as it is proposed that the effluent from the North Las Vegas Waste Water Treatment Reclamation Facility would be collected in a Regional Conveyance System that is being designed and constructed by the CWC.

We have reviewed the Draft Environmental Assessment. Locating the Waste Water Reclamation Facility at Nellis AFB instead of the originally proposed Losee/Frehner site would reduce the distance from the CWC's regional facilities by approximately three miles, thus saving sewer rate payers the additional cost of those facilities.

The CWC supports the findings of the Draft EA and the associated Draft FONSI.

Should you have any questions, please do not hesitate to contact me at 702-319-4433.

Respectfully,

Douglas W. Karafa  
General Manager  
Clean Water Coalition



Sandra Donnelly



## CLARK COUNTY WATER RECLAMATION DISTRICT

**MISSION STATEMENT: TO COLLECT, TREAT AND RECLAIM WASTEWATER.**

### FAX TRANSMISSION

**Date:** 3/6/08  
**To:** Mike Estrada  
**Fax #:** 702-652-9838  
**From:** Richard Mendes  
**Subject:** Comments on Draft Environmental Assessment

You should receive 5 page(s) including this cover sheet.

### COMMENTS:

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**\*\*IF YOU HAVE ANY DIFFICULTY RECEIVING THIS FAX, PLEASE CALL (702) 434-6649\*\***

The information contained in this document is privileged and confidential and is intended solely for the above-named individual or entity. If you are not the intended recipient or an employee responsible for delivering this document to the intended recipient, you should be aware that any distribution, copying or communication of this document or the information contained herein is strictly prohibited. If you have received this communication in error, please notify us immediately.

BOARD OF TRUSTEES  
Chip Maxfield, *Chair* . Rory Reid, *Vice Chair*  
Susan Brager . Tom Collins . Chris Giunchigliani . Lawrence Weekly . Bruce Woodbury  
Richard Mendes, *General Manager*





# Clark County Water Reclamation District

*Mission: To manage reclaimed water as a resource.*

March 6, 2008

Mr. Mike Estrada  
99 ABW/PA  
4430 Grissom Ave, Suite 107  
Nellis AFB, NV 89191

RE: Comments on the Draft Environmental Assessment of the Enhanced Lease of U.S. Air Force Lands to the City of North Las Vegas for Construction and Operation of a Water Reclamation Facility, Nellis Air Force Base, Nevada

Dear Mr. Estrada:

We respectfully submit our comments on the above Environmental Assessment in the attached document. We greatly appreciate your willingness to allow us two extra days to submit our comments. A copy of our comments has been sent by fax to expedite receipt. An original copy will be delivered by hand to your office.

Please do not hesitate to call if you have any questions. I can be reached at 702.434.6621 or email at [rmendes@cleanwaterteam.com](mailto:rmendes@cleanwaterteam.com).

Sincerely,



Richard Mendes  
General Manager

Enclosure(s): as stated

**BOARD OF TRUSTEES**

Chip Maxfield, *Chair*. Rory Reid, *Vice Chair*.  
Susan Brager. Tom Collins. Chris Giunchigliani. Lawrence Weekly. Bruce Woodbury  
Richard Mendes, *General Manager*

5857 East Flamingo Road. Las Vegas, Nevada 89122. (702) 434-6600. (800) 782-4324  
[cleanwaterteam.com](http://cleanwaterteam.com)



CLARK COUNTY WATER RECLAMATION DISTRICT

**Response to the City of North Las Vegas Nellis EA**

---

**Richard Mendes, General Manager**

**3/6/2008**

The following document contains comments submitted during the public comment period.



# Response To the City of North Las Vegas Nellis EA

---

Page 1 Paragraph E - Waste Water generated under no action alternative.

If the WRF were constructed 3.6 mi away at the Frehner site, the plant would only receive waste water generated by CNLV. Under the no action alternative the CNLV would not be serving Nellis AFB.

## SECTION 1.0 PURPOSE AND NEED FOR ACTION

According to information provided by the CNLV, we understand that a pump station will still be required at the Nellis site. Is this correct?

Page 1-7, ¶ 1 - States that NPDES permit will be required for discharge into Sloan Channel.

Has the CNLV talked to CCRFCD about using the Sloan Channel? The Sloan Channel is concrete lined at the proposed Nellis site, however approximately 0.2 mile downstream of its juncture with the East channel of the Flamingo Wash; the channel enters a reach of unlined natural channel. Will CCRFCD require additional channel reinforcement to accommodate the treated waste water flows in the unlined portions of the Flamingo Wash?

## SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Page 2.1, ¶ 2 – States *“The CNLV, in a cooperative endeavor, proposed to construct and operate a WRF on the leased property. Clark County, Nevada; Clark County Water Reclamation District; Southern Nevada Water Authority; and Clean Water Coalition would cooperate with the CNLV I the proposed project.”*

This statement mentions that CCWRD would cooperate with the CNLV but does not specify the terms or provide details of the cooperation mentioned. We need better definition of what this cooperation entails to provide comments.

CCWRD anticipates that they will enter into negotiations regarding the customers who will reside in the new CNLV service area.

## SECTION 4.0 ENVIRONMENTAL BENEFITS

### SUB SECTION 4.7

#### 4.7.1.2

Nellis AFB currently irrigates its golf course with well water to which they have water rights. It is not clear how much environmental benefit will occur from replacing well water with reclaimed water from

## Response To the City of North Las Vegas Nellis EA

---

the proposed treatment plant. How much reclaimed water will be used for this purpose? What is the affect upon return flow credits? Will the AFB cease using their wells completely?

Using reclaimed water would reduce the amount of water pumped from the aquifer. The Nellis wells are located in the Las Vegas aquifer. Water in the Las Vegas aquifer supplies some individual wells, however a search of the Nevada State Engineers water resources database does not reveal any private wells in the vicinity of the proposed site. Municipal drinking water wells are not located in Las Vegas aquifer. What is the extent of this benefit?

### **Page 4-15 ¶ 3 - Cumulative beneficial impacts on regional water quality**

Reclaimed water produced by the three existing treatment plants provides recreation use by returning the water to Lake Mead. The flow from the proposed CNLV plant would occur approximately 4 miles upstream from its current location in Las Vegas Wash at the City of Las Vegas Treatment Plant.

Has any work been done to quantify the amount of return flow lost to evaporation at the new discharge point?





## SOUTHERN NEVADA WATER AUTHORITY

1001 South Valley View Boulevard • Las Vegas, NV 89153  
(702) 258-3939 • snwa.com

March 11, 2008

Eloisa V. Hopper  
Chief, Environmental Management Flight  
99 CES/CEV  
4349 Duffer Dr., Suite 1601  
Nellis Air Force Base, Nevada 89191-7007

**SUBJECT:** Environmental Assessment and Draft Finding of No Significant Impact for Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas For Construction and Operation of a Water Reclamation Facility Nellis Air Force Base, Nevada

Dear Ms. Hopper:

Thank you for the opportunity to review the above referenced draft document. The Authority represents seven-member water and wastewater agencies in Southern Nevada including Big Bend Water District, Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, Clark County Water Reclamation District, and Las Vegas Valley Water District. The Authority's mission is to manage the water resources of southern Nevada and develop solutions that will ensure adequate future water supplies for the Las Vegas Valley.

The City of North Las Vegas, along with the other members of the Authority, have been engaged in watershed management issues for many years, particularly with the formation of the Las Vegas Wash Coordination Committee and the Las Vegas Valley Watershed Advisory Committee. Continued growth in the Las Vegas Valley has increased the need for additional wastewater treatment and discharge. The Authority supports the United States Air Force and the City of North Las Vegas' proposed action described in the environmental assessment.

Please contact Keiba K. Crear, Environmental Monitoring and Management Division Manager at 702-822-3388 if we can offer any additional assistance.

Sincerely,

Kay Brothers  
Deputy General Manager  
Engineering and Operations

KB/df

### SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District





# Department of Air Quality & Environmental Management

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Lewis Wallenmeyer, Director • Alan Pinkerton, Assistant Director • Tina Gingras, Assistant Director

March 18, 2008

Mr. Mike Estrada  
99ABW/PA  
4430 Grissom Ave, Suite 107  
Nellis AFB, NV 89191

**Re: Environmental Assessment for Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas For Construction and Operation of a Water Reclamation Facility at Nellis Air Force Base, Nevada**

Dear Mr. Estrada:

The Clark County Department of Air Quality and Environmental Management (DAQEM) reviewed the draft Environmental Assessment (EA) and provides the following comments from the Air Quality Planning and the Water Quality Planning Divisions of the department.

**The Air Quality Planning Section of DAQEM provides the following comments:**

1. Section 43 of the Air Quality Regulations deems an odor occurrence to be a regulation violation if a control officer is able to detect the odor twice within a period of one hour.
2. The EA does not include a section to address how the source intends to mitigate for odor (i.e. mercaptans, indoles, skatoles, and amines) or destruction of digester gas (i.e. combusting methane gas, flares, etc.).
3. Any construction on a site impacting an area equal to or greater than 0.25 acres requires issuance of a dust control permit prior to commencement of any construction activity.
4. Section 94 Construction Handbook Best Management Practices must be employed at all times during construction.
5. Section 3.5 of the EA misstates that Clark County is classified as moderate nonattainment for the 8-hour Ozone standard. On December 22, 2006 the DC Circuit Court of Appeals vacated the Ozone Phase I Implementation Rule which classified portions of Clark County as "Basic" nonattainment under Subpart 1 of the CAA. The court remanded the rule back to EPA for corrective action, to date EPA has not reissued the rule leaving Clark County designated nonattainment for ozone, but unclassified. EPA intended to promulgate a new rule to reclassify the Subpart I areas in the fall of 2008 and finalize the rule in the first half of 2009.

Page 1 of 4



Mr. Mike Estrada  
March 18, 2008

6. However, as recently as March 12, 2008, EPA has set a new National Ambient Air Quality Standard (NAAQS) for Ozone that affects Clark County. We fully expect that Clark County will be classified as non-attainment for the new standard, but at this time do not know the specific designation that will be applied. The official designation is not expected to be made until 2010.
7. For additional details pertaining to the status of Clark County regarding Ozone, please do not hesitate to contact John Koswan, Air Quality Assistant Planning Manager, for the latest information in order to make the descriptions in the EA as accurate as possible.

**The Water Quality Planning Section of DAQEM provides the following comments:**

General Comments

1. The proposed waste treatment facility has been included in the 208 Water Quality Management Plan currently being updated by Clark County. Information regarding the facility was provided by the City of North Las Vegas (CNLV). The proposed facility will be located in Hydrographic Basin 5 (Las Vegas Wash.)
2. There is no mention of the Sewage Wastewater Advisory Committee (SWAC), of which the CNLV is a member.
3. The installation of a waste treatment facility will reduce the amount of groundwater pumped on Nellis property.
4. Closing of groundwater wells is a major goal of the Las Vegas Groundwater Management Advisory Committee. The EA should describe how many wells will be capped as a result of this action. We recommend contacting the Las Vegas Valley Water District and the State Engineer's office to obtain guidelines for shutting down and capping of wells.
5. Appropriate permits will need to be obtained for construction of the waste treatment facility, underground tanks, wastewater discharge, recycling, and reuse.
6. Clark County is developing a Clark County Wellhead Protection Plan. Wells should adhere to the new wellhead protection plan guidelines.
7. While there is mention of the facility being installed to better serve the CNLV residents and businesses, and while infrastructure upgrades are a given, there is no mention of any work being done to encourage or dissuade Individual Sewage Disposal System (ISDS) (i.e., septic system) use. If there are any plans to offer connection incentives to ISDS owners during any upgrade work that might be done please consider describing them as options.
8. We recommend that permanent Best Management Practices (BMPs) be used pre- and post-construction to decrease stormwater pollution potential spurred by an increase in impervious surfaces.
9. We recommend reducing runoff volumes by reducing unnecessary impervious surfaces.
10. Any new storm drain inlets should be marked with "Don't Pollute, Drains to Lake Mead" placards, and appropriate BMPs for stormwater quality management be put in place during construction and in post construction design.
11. A permit from NDEP will be needed for discharge of the reclaimed water.
12. We require on-site construction supervisors to take DAQEM dust and storm water protection classes which are offered throughout year by DAQEM and the Stormwater Quality Management Committee.



Specific Comments

1. Section 1  
Section 1.4, p.1-7, line 5: Suggest referring to NAC 445A.275-.2771 on effluent reuse criteria.
2. Section 2  
p.2-6, Table 2-1, Water Resources: Proposed Action states that “minor impacts to local drainages ways would occur,” while the USAF Action states, “No impacts would occur.” These statements somewhat contradict each other. Suggest either stating what the minor impacts are or that there are none.
3. Section 3
  - i) Section 3.1, p.3-1, Wetlands and Waters of the U.S.: Suggest rephrasing, since in the LV Valley Municipal Separate Storm Sewer System (MS4), according to NDEP and the US EPA, the Wetlands and Waters of the U.S. begin at the curb line or gutter, not the drainage channels.
  - ii) Section 3.7.1, p.3-8, 2nd and last sentences: See previous comment.
4. Section 4
  - i) Section 4.3.1, p.4-3, ¶1: While it is commendable to address the issue of increased impervious surface with respect to runoff quality, it is suggested that another example of a BMP be added to the silt fence suggestion, as this approach is generally considered a structural BMP for construction activities, not for post-construction as could be inferred here.
  - ii) Section 4.7.1.1, pp.4-8 to 4-9, general: While a great deal of text is devoted to stormwater quality management during construction, there is no mention of site design considerations relative to post-construction (also, see previous comment).
  - iii) Section 4.7.1.1, p.4-9, 1st full ¶: There should be a discussion of the possible consequences of the reach of the Sloan Channel from the WRF downstream, which is currently ephemeral, containing perennial flows. Although the channel is lined, this new water resource could attract both positive and detrimental flora and fauna that do not survive in a dry wash environment (e.g., feral cats, rodents, songbirds). In addition, the potential for vector (i.e., mosquito) propagation increases. While this may not be significant, such circumstances should be considered reasonable possibilities.
  - iv) Section 4.8, p.4-10, 1st ¶: See above comment.
  - v) Section 4.11.1, p.4-14, last two sentences: While hazardous or toxic substances may not be used in the process, if large quantities of chemicals (e.g., alum, disinfectants) are stored and used on site, spill contingency planning and BMP placement should be considered to mitigate any potential stormwater pollution issues.
  - vi) Section 4.14, p.4-15, ¶3: Please describe how these construction sites and their respective post-construction site designs been taken into account both independently and in conjunction with the WRF site design to mitigate stormwater pollution potential.
  - vii) Section 4.14, p.4-16, ¶3, general: Please describe any potential cumulative negative or positive impacts on the local water quality as a result of the Proposed Action.

Mr. Mike Estrada  
March 18, 2008

Again, thank you for the opportunity to review and comment. If you have any questions, please contact John Koswan at (702) 455-1647 (air quality comments) or Ebrahim Juma at (702) 455-1649 (water quality comments).

Sincerely,

A handwritten signature in cursive script, reading "L. Wallenmeyer".

Lewis Wallenmeyer  
Director





***USAF/Nellis AFB Responses***

## **RESPONSE TO CLEAN WATER COALITION COMMENTS:**

The U.S. Air Force (USAF) and Nellis Air Force Base (AFB) thank the Clean Water Coalition for participating in the Environmental Impact Analysis Process (EIAP) for the proposed action and alternative actions. We appreciate the Clean Water Coalition's support of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI).

## **RESPONSE TO CITY OF HENDERSON UTILITY DEPARTMENT COMMENTS:**

The USAF and Nellis AFB thank the City of Henderson Utility Department for participating in the EIAP for the proposed action and alternative actions. We appreciate the City of Henderson Utility Department's support for the proposed action.

## **RESPONSE TO CLARK COUNTY WATER RECLAMATION DISTRICT COMMENTS:**

The USAF and Nellis AFB thank the Clark County Water Reclamation District (CCWRD) for participating in the EIAP for the proposed action and alternative actions.

Regarding Page 1, Paragraph E comment:

The CCRWD is correct, under the No Action Alternative, the City of North Las Vegas (CNLV) would not be serving Nellis AFB.

Regarding Section 1.0, Purpose and Need comment:

We apologize for the misunderstanding and clarify that a pump station (lift station) and corresponding force main will not be required if the CNLV Water Reclamation Facility (WRF) is constructed on the Nellis AFB site.

Regarding Section 2.0 Description of the Proposed Action and Alternatives:

The terms of cooperative efforts among local agencies are beyond the scope of analysis required for Federal actions addressed in the EA. However, the CNLV has indicated to Nellis AFB that they are working "with the Clark County Regional Flood Control District and the Clean Water Coalition on effluent discharge options. The Clean Water Coalition is the umbrella agency for all of the Las Vegas Valley wastewater dischargers and is tasked with studying the pros and cons for effluent discharge to the Sloan Channel or constructing a pipeline from the CNLV WRF at Nellis AFB to the Systems Conveyance Operations Project point of connection. Once this analysis is completed, the CNLV will have more information for the CCWRD on the effluent discharge option."

Regarding Section 4.0 Environmental Benefits, Sub Section 4.7 comments:

Nellis AFB would cease using Wells 11, 12, 13, and 14. As stated in the EA, an average of approximately 450 million gallons of groundwater per year (mgy) is pumped from these wells to irrigate the golf course. The golf course greens currently comprise approximately 280 acres. Under the Proposed Action, 40 acres (14%) would be removed. If each acre of the golf course required the same amount of water for irrigation, then water use would be expected to decrease by an average of about 63 mgy to approximately 387 mgy. However, due to varying types of vegetation and presence or absence of features (i.e. sand traps, artificial ponds, cart paths), there is variability in the amount of water required for each acre.

While there would be some impact to flow credits, use of reclaimed water for golf course irrigation is consistent with the Clark County Comprehensive Plan, Volume 1, Water Quality Policy CV 5-2.0, *Promote the use of treated effluent for area green space including, but not limited to, parks and golf courses.*

With regard to the extent of the benefit in ceasing to use groundwater for golf course irrigation, the Clark County Comprehensive Plan, Conservation Element, Chapter 1, states:

*Groundwater has been a principal source of water for Clark County since the 1940s. Overpumping of this resource caused water levels to decline creating space within the aquifer. Since 1992 SNWA has been reintroducing unused apportionment of the Colorado River Water into the aquifer in a program of artificial recharge. In 1997, the state legislature passed legislation that required SNWA to design and implement a comprehensive groundwater management program for the Las Vegas Valley. The groundwater management program is to help coordinate and manage basin activities with an eye toward conservation, aquifer protection and artificial recharge.*

Closure of Nellis AFB Wells 11, 12, 13, and 14 would reduce pumping an average of 450 mgy of groundwater from the Las Vegas aquifer system, which is consistent with both Clark County and SNWA groundwater management programs. In addition, ceasing to draw groundwater is consistent with the Clark County Comprehensive Plan, Volume 1, Water Quality, Groundwater Policy CV 6-2.0, *Measures to bring groundwater pumping into balance with natural recharge should be encouraged*, and CV 6-2.1, *Measures to manage groundwater aquifers to minimize damage from land subsidence and high water tables should be encouraged.*

Regarding Page 4-15 ¶3 comments:

It is beyond the scope of analysis required for Federal actions addressed in this EA to quantify loss of flow due to evaporation at the new discharge point.

**RESPONSE TO NEVADA STATE CLEARINGHOUSE COMMENTS:**

The USAF and Nellis AFB thank the Clearinghouse for participating in the EIAP for the proposed action and alternative actions and ensuring compliance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, dated July 14, 1982.

**RESPONSE TO SOUTHERN NEVADA WATER AUTHORITY COMMENTS:**

The USAF and Nellis AFB thank the Southern Nevada Water Authority (SNWA) for participating in the EIAP for the proposed action and alternative actions. We appreciate the Southern Nevada Water Authority's support for the proposed action.

